



SEPARATOR



54-00068



HAZ WASTE



COMPLIANCE



08/27/1990



N/A

Cedar Chemical, Order objectives and authorities

1. Hydrogeologic characterization and groundwater monitoring accomplished under AIO 86-027
2. "Finding of Fact" section should include a para detailing Part B withdrawal for Bio Treatment Units and subsequent closure of all RCRA storage units thereby leaving Cedar with no operating units for which interim status may be claimed. However Cedar has not LOIS because they have never had an official NOD or LOIS notification from this Department. Also note in "ORDER" section that Cedar will ~~either~~ be denied IS officially?
3. Take Davids comments on the hydrogeologic study and GWM and incorporate into both "Finding of Fact" and "order" sections.

CHARLES W. METCALF, 1840-1924
WILLIAM P. METCALF, 1872-1940
JOHN W. APPERSON, 1896-1985

CHARLES METCALF CRUMP
JERRE G. DUZANE
JOHN B. MAXWELL, JR.
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MELODY W. OLIVER
WILLIAM B. MASON, JR.
STEVEN N. DOUGLASS
RANDY S. GARDNER
KAREN R. WILLIAMS
* ALSO ADMITTED IN MISSISSIPPI

SAMUEL RUBENSTEIN
OF COUNSEL

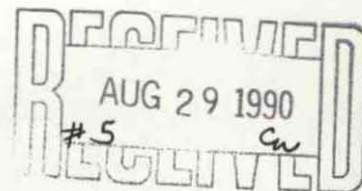
LAW OFFICES
APPERSON, CRUMP, DUZANE & MAXWELL

SUITE 2110
ONE COMMERCE SQUARE
MEMPHIS, TENNESSEE 38103

901/525-1711

TELECOPY 901/521-0789

August 27, 1990



EAST OFFICE

SUITE 100
KIRBY CENTRE
1755 KIRBY PARKWAY
MEMPHIS, TENNESSEE 38120
901/756-6300
TELECOPY 901/757-1296

Mr. Mike Bates, Manager
Hazardous Waste Division
Department of Pollution Control & Ecology
8001 National Drive
Little Rock, Arkansas 72209

Re: Cedar Chemical Corporation
West Helena, Arkansas

Dear Mike:

By letter of June 28, 1990, I sent you Woodward-Clyde's final Site Characterization Report which was prepared in connection with Cedar's proposed construction of a DCA manufacturing plant and related facilities. I am enclosing with this letter two additional documents which supplement the report. The first is a summary of analytical results reported with respect to soil sample extracts in the area of the so-called "tank farm" by Sorrells Research, Inc. (and where applicable, split sample results analyzed by Cedar). The underlying data is maintained by Joe Porter at the facility. The second enclosure is a copy of a letter dated August 6, 1990 from Woodward-Clyde to John Miles, Plant Manager, at the West Helena Plant with respect to the tank farm. We recently concluded closing of the construction loan and Cedar is proceeding with the project.

With respect to the buried drums which were discovered on the Plant site last spring, Cedar has identified several qualified hazardous waste disposal contractors and we are prepared to send them the removal plan prepared by Woodward-Clyde for the purpose of receiving competitive bids. We would prefer to initiate this effort following the entry of a Consent Administrative Order for the reasons which we discussed in our meeting this summer. Please submit the draft CAO so that Cedar can make arrangements for removal of the drums at the earliest possible date and proceed with a facility investigation per the guidance plan which Sammy Bates sent to Joe Porter by letter of April 13, 1990, and the provisions of the CAO referred to above.

2822 O'Neal Lane
Post Office Box 66317
Baton Rouge, Louisiana 70896
504 291-1873

Woodward-Clyde Consultants

August 6, 1990

Mr. John Miles
Plant Manager
Cedar Chemical Corporation
Post Office Box 2749
West Helena, Arkansas 72390

Re: WCC File No: 90B550C
West Helena
DCA Tank Farm Location

Dear John:

Woodward-Clyde Consultants (WCC) and Cedar Chemical Corporation (Cedar) have carried out an environmental investigation of the DCA tank farm area. The objective has been discovery of any major pollution sources such as:

- o buried drums that might best be excavated and disposed now, and
- o prevention of potential for migration of contamination as a result of construction activities.

As a result of a magnetometer survey, trenching and 23 samples in the tank farm area it can reasonably be concluded that excavation beneath the tank farm area is not required prior to construction of the tank farm in order to mitigate the potential for environmental impairment. A sketch of the DCA Site is attached; a new tank farm area is depicted on the sketch to be moved south of the original proposed location. The new tank farm location is an appropriate area for construction.

Consulting Engineers, Geologists
and Environmental Scientists

Offices in Other Principal Cities



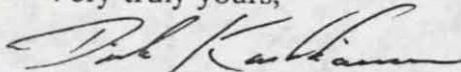
Mr. John Miles
August 6, 1990
Page 2

There is precedent in Arkansas for construction atop an area where there is soil or groundwater contamination as long as the following precautions are taken:

- o Footings, pilings or foundations should not penetrate into groundwater without special design precautions.
- o The concrete foundation should be constructed such that it simulates an engineered cap. Waterstops should be used on all joints, silicon calk should be used to further seal the joints, a sealant should be used on all concrete surfaces. A drawing depicting acceptable construction is attached by way of example.
- o Access is allowed for construction of recovery wells adjacent to the facility in the event that such becomes necessary. By constructing the tank farm Cedar is giving up the option for the near future to further treat the soils in place through fixation; therefore, it will also be prudent to allow access for shallow injection wells to force subsurface flow directly underneath the tank farm area and eventually desorb the contaminants from the soil.

If you have any questions, please call.

Very truly yours,



Dick Karkkainen
Vice President
Associate

RDK/lbh

cc: Allen T. Malone
Joe Porter
Randal Tomblin
Tom Lodice

Samples of July 23, 1990 representing the area just north of the proposed DCA tank farm.									
Soil samples extracted by Cedar. Analysis of extracts by Sorrells Research, Inc. except as noted									
									8/14/90
									J Porter/G Satterfie
	#1	#2	#3	#4	#5	#6	#7	#8	
2,3-DCA	50.20	ND	ND	ND	ND	ND	1,200.00	ND	
3,4-DCA	640.00	40.10	9.60	ND	14.60	63.00	4,591.00	19.00	
2,3-DCNB	ND	ND	ND	ND	ND	ND	ND	ND	
3,4-DCNB	ND	ND	ND	ND	ND	ND	309.00	ND	
Propanil	ND	ND	ND	ND	1.60	100.00	14,159.00	79.00	
o-DCB	ND	ND	ND	ND	ND	ND	1,041.00	ND	
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	
Anisole	ND	ND	ND	ND	ND	ND	ND	ND	
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	
DMBP -Sorrells	16,813.00	834.00	7,809.00	3.00	4,430.00	33,438.00	42,392.00	10,160.00	
DMBP-Cedar	13,485.00	6,832.00	4,434.00	9.40	2,458.00	33,692.00	43,512.00	9,359.00	

08/14/90

13:07

CEDAR CHEMICAL CORP, MEMPHIS, TN

006

RCA BY: CEDAR CHEMICAL CORP.

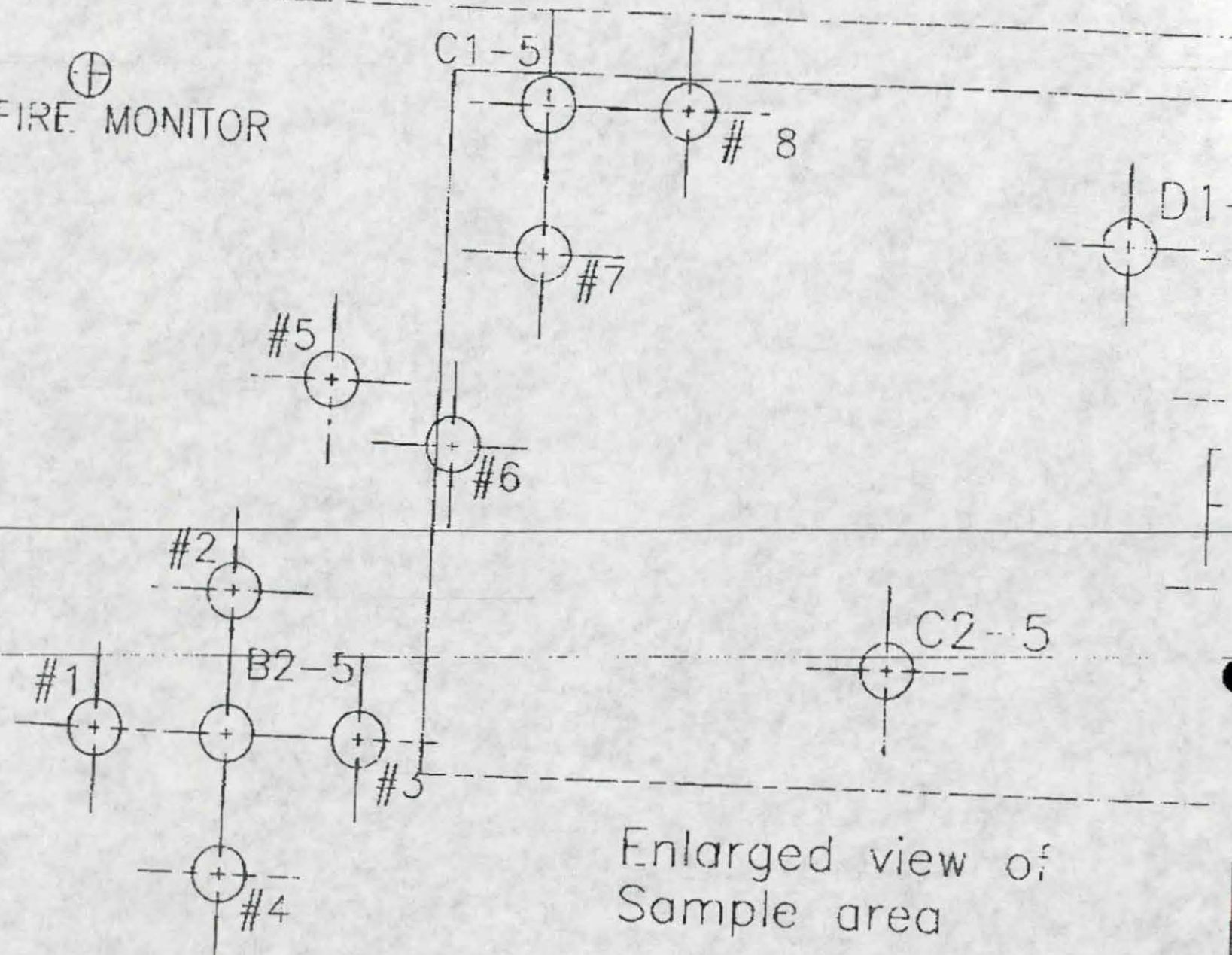
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501 672 3705

MEMPHIS: # 5

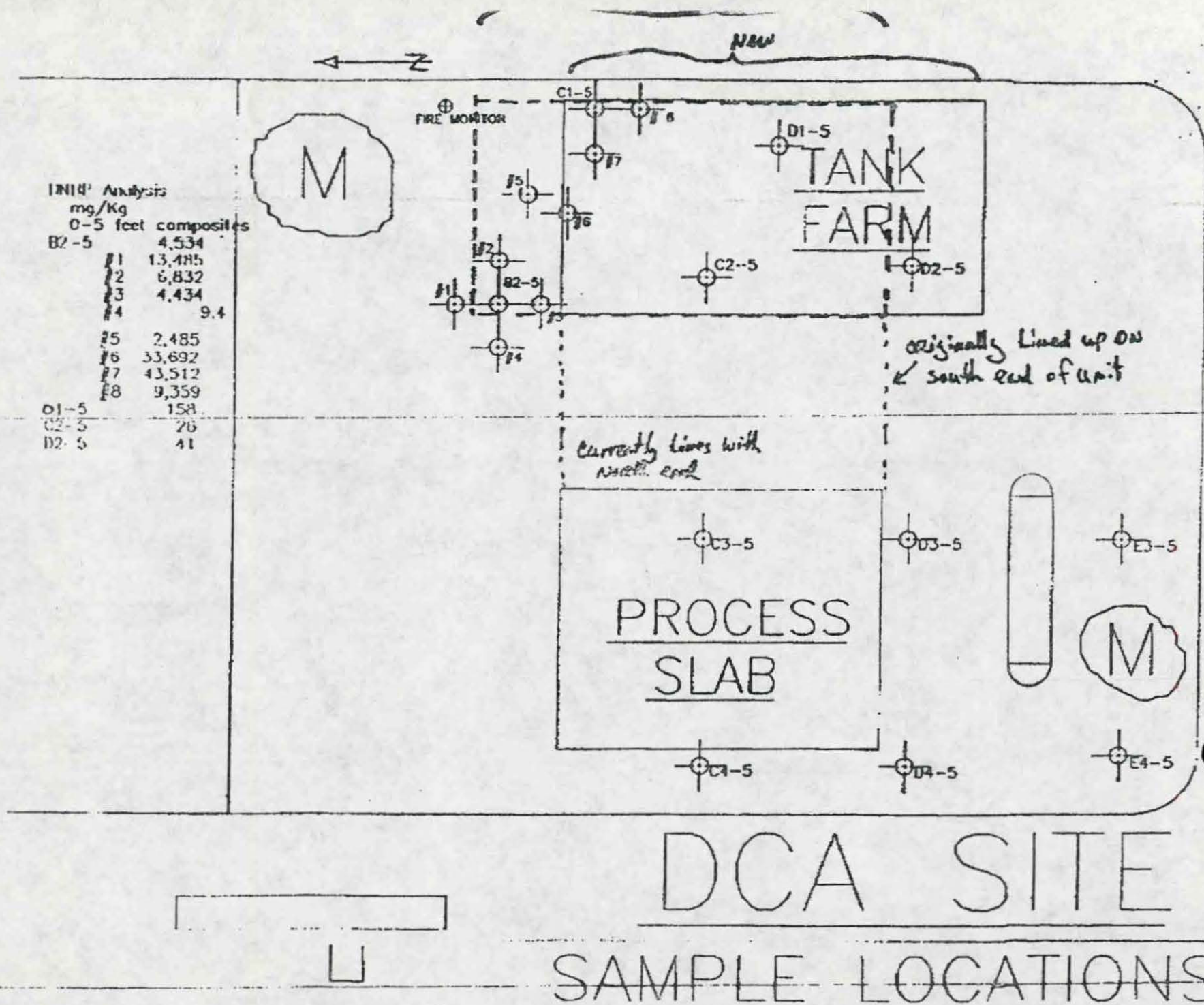
F05-05

⊕
FIRE MONITOR



P02/02

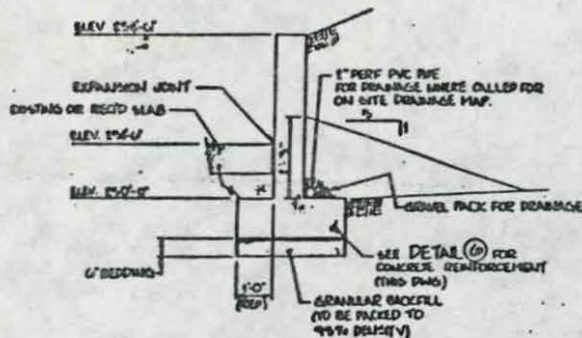
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PVC PIPE
LARGE

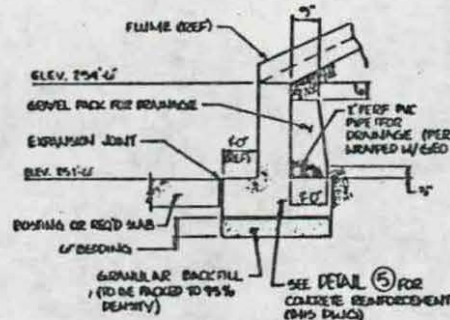
PACK
DRAINAGE

DETAIL ⑤ FOR
REINFORCEMENT
(THIS Dwg)



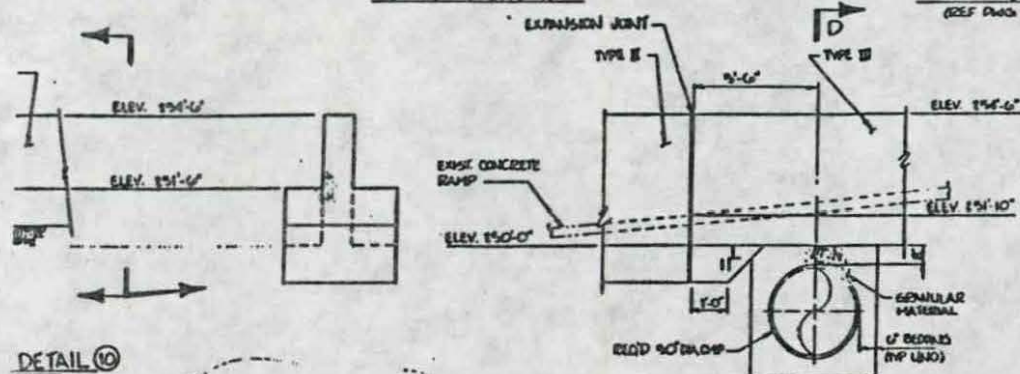
SECTION "B-B"

CONTAINMENT WALL - TYPE II
SCALE: 1/4" = 1'-0"
(REF. DWG. E14547)

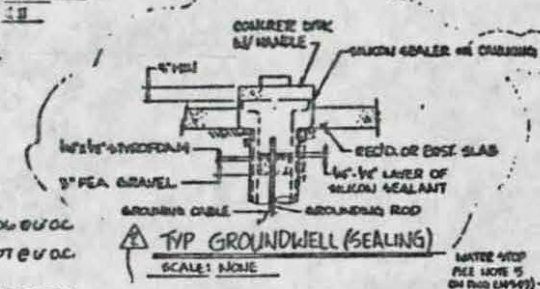


SECTION "N-N"

CONTAINMENT WALL
TYPE II WITH FLUME
SCALE: 1/4" = 1'-0"
(REF. DWG. E14548)



DETAIL ⑩



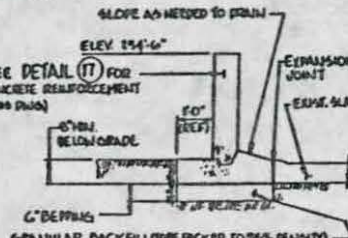
CONTAINMENT WALL - DETAIL ⑨

CONNECTION BETWEEN TYPE II & III
SCALE: 1/4" = 1'-0"
(REF. DWG. E14547)



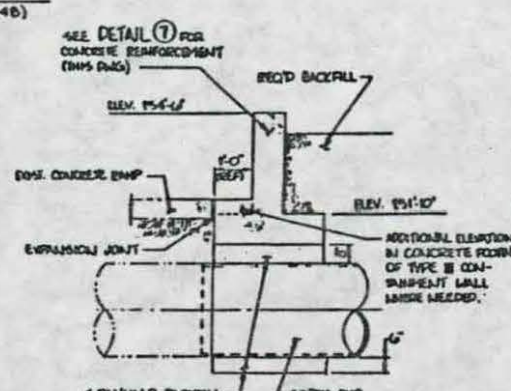
TYP. KEY W/ WATER STOP

DETAIL ⑪
SCALE: NONE
(REF. DWG. E14548, 49 & 50)



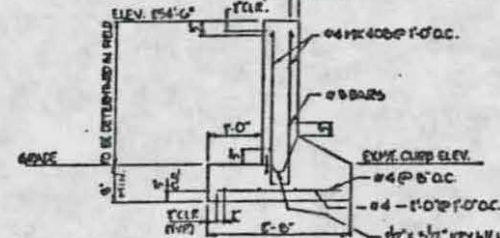
SECTION "P-P"

CONTAINMENT WALL - TYPE II
SCALE: 1/4" = 1'-0"
(REF. DWG. E14547)



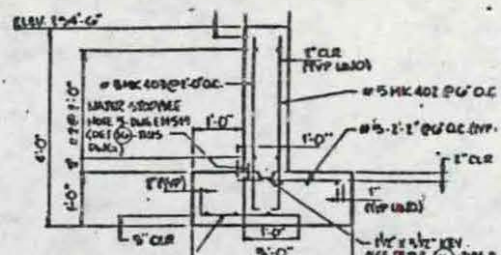
SECTION "D-D"

CONTAINMENT WALL - TYPE II
SCALE: 1/4" = 1'-0"
(REF. THIS DWG.)



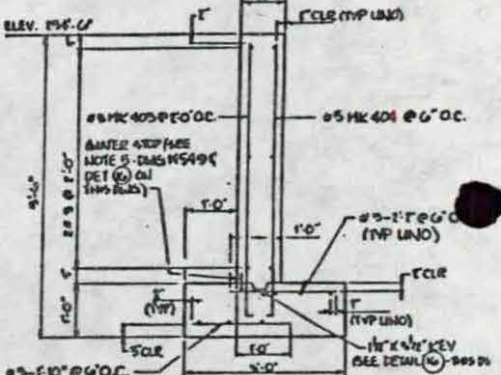
DETAIL ⑪ (TYPE II)

CONTAINMENT WALL REINFORCEMENT
SCALE: 3/4" = 1'-0"
(REF. THIS DWG.)



DETAIL ⑤ (TYPE I)

CONTAINMENT WALL REINFORCEMENT
SCALE: 3/4" = 1'-0"
(REF. THIS DWG.)



DETAIL ⑥ (TYPE II)

CONTAINMENT WALL REINFORCEMENT
SCALE: 3/4" = 1'-0"
(REF. THIS DWG.)

CONTAINMENT WALL REINFORCEMENT BAR SCHEDULE

BAR	NO.	TYPE	A	B
110	402	#5	1	1
110	402	#5	1	1
110	402	#5	1	1
110	402	#5	1	1
110	402	#5	1	1
110	402	#5	1	1
110	402	#5	1	1
110	402	#5	1	1
110	402	#5	1	1
110	402	#5	1	1

TYPE I: A

NORTH	CHECKED FOR CONSTRUCTION	DATE
	BY	DATE
ISSUE NO.		DATE

MARK	DATE	REV'D	REFERENCE DRAWINGS	APPROVALS
1	5-9-59	CD		DRAWN BY CBA
2	5-28-59	CBA		CHECKED BY MRN
				APPROVED BY

CHEMICAL CORPORATION

ARKANSAS

CONTAINMENT WALLS

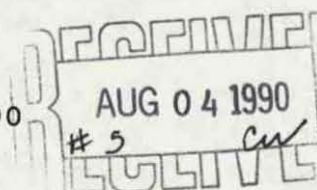
FILE NO.
REV. NO. 2
DWG. NO.
E 14550

CSN: 540068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT COMPLIANCE
FEES:

CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390
(501) 572-3701 • Fax No. 501-572-3795

August 23, 1990



David Hartley
Arkansas Dept. of Pollution Control & Ecology
P. O. Box 9583
8001 National Drive
Little Rock, AR 72209

Re: Final Groundwater Report - CAO LIS 86-027
Engineering Evaluation

Dear David:

In our letter of June 19, we submitted summaries of all the information generated in our groundwater monitoring program. We presented this to two engineering firms for their evaluation. A combined summary of their reports is attached.

We believe that the original intent of the Groundwater Monitoring Plan has been fulfilled. It has indicated two areas of concern and it has raised additional questions about the aquifer beneath the site.

The original plan has laid a good foundation for a remedial investigation. To determine the extent of constituents detected, additional soil samples and additional monitoring wells will be required. Wells around the surface impoundments will help to determine the impact of mounding caused by their volume. One or more wells may have to be located offsite to better define the impacts of seasonal levels and nearby agricultural land use. Additional data will then go forward into the development of remedial alternatives.

We request that the Department review our evaluations and comment on the direction of our program. Please call us if you have questions.

Sincerely,

Joe E. Porter
Environmental Engineer

cc: J.H. Miles
A.T. Malone
\\Joe\\DH0823

CHARLES W. METCALF, 1840-1924
WILLIAM P. METCALF, 1872-1940
JOHN W. APPERSON, 1896-1985

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SUITE 2110
ONE COMMERCE SQUARE
MEMPHIS, TENNESSEE 38103
901/525-1711

TELECOPY 901/521-0789

July 26, 1990



Mr. David Hartley
Geologist
Hazardous Waste Division
Arkansas Department of Pollution
Control & Ecology
8001 National Drive
Little Rock, Arkansas 72209

Re: Compliance Evaluation Inspection
ARD 990660649
Our Client: Cedar Chemical Corporation

Dear David:

This is in response to your letter dated June 26, 1990, addressed to Mr. Joe Porter at Cedar Chemical Corporation's West Helena Plant, received June 29, 1990. As requested, Joe Porter is submitting under separate cover for your approval a Supplement to the Groundwater Monitoring Program implemented pursuant to Paragraph 10 of the Consent Administrative Order in LIS 86-027. The supplement will specifically address the manner in which well water purged when samples are drawn in accordance with the approved groundwater monitoring program will be contained, stored and disposed of. Cedar proposes that the supplement be adopted as part of the new Consent Administrative Order which was discussed at our meeting in Little Rock on June 4, 1990. Until the supplement is approved by the Department, no additional groundwater samples will be drawn.

The purpose of this letter is to address your conclusion that purged groundwater drawn from the wells "is considered hazardous waste." Such a conclusion would have implications far beyond Cedar's method of disposing of purged monitoring well water and could ultimately impede Cedar's ability to implement corrective measures contemplated following completion of the RFI under the new Consent Administrative Order.

As we understand it, your interpretation is based on RCRA Regulation Section 261.33. We recognize that water which is contaminated as a result of clean-up of the disposal or spill of any commercial product (or off specification product) listed in

Mr. David Hartley
July 26, 1990
Page Two

this section would, under the mixture rule, be considered RCRA hazardous waste. However, we do not believe that groundwater recovered from monitoring wells located on the West Helena Plant meets this definition. The source of the contamination has yet to be determined and, in fact, that is exactly what Cedar expects to establish as a result of the expanded RFI, which we discussed at our meeting in Little Rock last month.

The only discarded commercial products at West Helena of which we are aware are the drum burial area discussed in Woodward-Clyde's removal plan submitted to Mike Bates in June 1990, and the drums which are contained in a vault located under a warehouse on the plant site. There is no indication that the contents of these drums have leaked or in any way contaminated groundwater on the site.

At this point, according to the people at the plant, the most likely source of the contamination appears to be process waste water disposed of on the site by a prior owner/operator during the period 1971 - 1972, which was the only period in which dinoseb was produced at the plant. Dinoseb process waste water is not a listed hazardous waste.

Another possible source would be de minimis losses of commercial chemical products, as that term is used in the de minimis exception to the mixture rule contained at Section 261.3(a)(iv)(D). Based partly on that rule, it seems sensible and environmentally sound for Cedar to containerize and dispose of purged well water in the biological treatment pond on site, the discharge of which as you know is subject to regulation under the Cedar's NPDES Permit. The proposed plan would be followed pending completion of the RFI/CMS process under the new CAO. I should point out that samples drawn from the existing groundwater monitoring wells will only generate an estimated 120 gallons of water per sampling event. By way of comparison, approximately 35,000 gallons of water per day are discharged through the biological treatment system in accordance with the NPDES Permit.

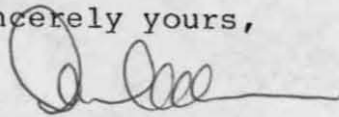
I have reviewed the issue which this letter addresses with environmental consulting firms, including Woodward-Clyde,

Mr. David Hartley
July 26, 1990
Page Three

and I believe there is ample precedent to conclude that groundwater drawn from monitoring wells on the West Helena site cannot properly be designated hazardous waste under RCRA unless the groundwater can be shown to be a "characteristic" hazardous waste. Woodward-Clyde's experience in dealing with EPA on other sites in similar situations has shown that where the source of contamination is not known, the groundwater is assumed not to be hazardous under the RCRA mixture rule. We would hope that you would construe the Arkansas Hazardous Waste Management Code in a similar manner.

Based on the information supplied above, I hope that you will be able to approve the plan for handling and disposing of purged monitoring well water submitted by Joe Porter. We would like to discuss this matter with the Department in conjunction with our initial discussions of the new proposed Consent Administrative Order. Cedar is also interested in expediting removal of the buried drums recently discovered at the West Helena Plant, but for purposes of preserving its contribution rights against the former owner of the Plant, it prefers to wait to do so in conjunction with an administrative order which will provide, as an interim measure, for the implementation of the Woodward-Clyde removal plan which was submitted to the Department last month. Accordingly, we would appreciate it if you would arrange to have a draft Consent Administrative Order submitted to us, and arrange a conference to discuss all of these matters at the earliest convenience of the persons involved.

Sincerely yours,



Allen T. Malone

ATM:jw

cc: Mr. Mike Bates, Manager
Hazardous Waste Division
Department of Pollution Control & Ecology

cc: Mr. Joe Porter

CHARLES W. METCALF, 1840-1924
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TELECOPY 901/521-0789

July 26, 1990

RECEIVED
JUL 27 1990
#9
CW

EAST OFFICE
SUITE 100
KIRBY CENTRE
1755 KIRBY PARKWAY
MEMPHIS, TENNESSEE 38120
901/756-6300
TELECOPY 901/757-1296

Mr. David Hartley
Geologist
Hazardous Waste Division
Arkansas Department of Pollution
Control & Ecology
8001 National Drive
Little Rock, Arkansas 72209

CSN: 54-008 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

Re: Compliance Evaluation Inspection
ARD 990660649
Our Client: Cedar Chemical Corporation

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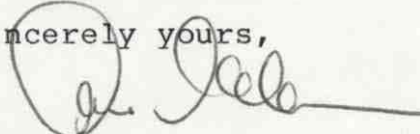
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Sincerely yours,



Allen T. Malone

ATM:jw

cc: Mr. Mike Bates, Manager
Hazardous Waste Division
Department of Pollution Control & Ecology

cc: Mr. Joe Porter

F

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 9583

LITTLE ROCK, ARKANSAS 72209

PHONE: (501) 562-7444

FAX: (501) 562-4632

July 25, 1990

CSN: 54-0068 PERMIT NO. _____
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

Mr. Joe Porter
Cedar Chemical Corporation
P. O. Box 2749
West Helena, AR 72390

RE: Final Groundwater Report for CAO LIS 86-027

Dear Mr. Porter:

This will acknowledge receipt of the final groundwater report dated June 19, 1990. I have reviewed the report and determined it to be inadequate. Cedar Chemical Corporation submitted a plan for the groundwater monitoring system in the September 28, 1988, letter. The final report of this plan was to contain a summary and engineering evaluation of the facility's impact on the uppermost aquifer in addition to water level measurements and laboratory analysis. You were advised to proceed with implementation of this plan on December 2, 1988, and this plan was conditionally approved by the June 28, 1989, letter from the Department. Be advised that failure to submit a report consistent with the approved plan will be considered a violation of paragraph 10(c) of the CAO. Although the CAO does not address specific time frames for submittal of this report, a report should be submitted as soon as practicable.

If you have any questions or if I can be of assistance, feel free to call me.

Sincerely,



David Hartley
Geologist
Hazardous Waste Division

DH/ckh:LTR972

CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390
(501) 572-3701 • Fax No. 501-572-3795

D. Hartley
RECEIVED
JUL 27 1990
278

July 24, 1990

David Hartley, Geologist
Arkansas Department of Pollution Control &
Ecology
8001 National Drive
P.O. Box 9583
Little Rock, AR. 72209

Re: Compliance Evaluation Response
ARD 990 660 649

CSN: 54-0068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES

Dear David:

In reply to your letter of June 26, we are submitting our plan to handle purged ground water. For this purpose, our Ground Water Monitoring Well Plan has been revised with the attached procedure for sampling.

This procedure makes certain assumptions concerning our interpretation of the definition of the ground water. This letter addresses the technical details of the sampling procedure while a separate letter from Allen Malone will address other aspects noted in your letter of June 26.

Sincerely,



Joe E. Porter
Environmental Engineer

cc: J. Miles
A. Malone

Groundwater Monitoring Plan

Sampling of Monitoring Wells - Revised July 1990

Each monitoring well is constructed of a two inch stainless steel pipe with a section of stainless steel, screened pipe. Each well is complete with a one-half inch tube and a three-fourth inch tube. Nitrogen is forced into the one-half inch tube creating an air lift for pumping the well pipe.

Prior to collection of samples for laboratory analysis, wells are purged to assure that water representative of the aquifer has entered the well. The amount purged will consist of a minimum of three (3) casing volumes or to dryness. The exact volume is calculated at each sampling period and is based upon the water level.

Purged well water will be air lifted (using nitrogen) from each well and pumped directly to a drum. Purged well water will not be discharged directly onto the ground. When purging is complete, samples will be collected. Sample bottle rinsate will be poured into the drum. Drums containing purged well water (approximately 120 to 150 gallons per sampling event) will be moved to a process area. The purged well water will be pumped to the plant biological waste treatment system. Drums will be labeled for groundwater use and retained for the next sampling event.

File

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444
FAX: (501) 562-4632

July 17, 1990

CSN: 54068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

Allen T. Malone
Apperson, Crump, Duzane & Maxwell
Suite 2110
One Commerce Square
Memphis, TN 38103

RE: Cedar Chemical Corporation
West Helena Plant

Dear Mr. Malone:

We have received your letter dated June 28, 1990, which transmitted Cedar Chemical Contractor's final site Characterization Report regarding proposed new construction on the West Helena Plant grounds. Your letter also requests confirmation that the report forwarded by Joe Porter (Cedar Chemical) on June 10, 1990, completed the tasks under the Consent Administrative Order (CAO) LIS 86-027.

Our staff has given the documents referenced above preliminary reviews. Based on these reviews the following observations are offered. The groundwater monitoring/investigation plan which was approved for implementation under CAO LIS 86-027 requires that a summary and engineering evaluation of the facilities impact on the upper most aquifer be included as part of the final report. Our preliminary review has found the final report incomplete in this area.

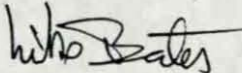
The Site Characterization Report prepared by Cedar's consultant indicates levels of Dinoseb, Propanil, and other constituents in the area of the proposed tank farm and process area ranging from trace levels to in excess of 160 ppm. The contamination which has been characterized in the proposed project area will of necessity be incorporated into a site-wide investigation as we discussed during our meeting of June 1990.

While the reported levels are not extensive enough to warrant removal or immediate action or that would preclude

Cedar from preceding with the project the Department is concerned with any level of chemical contamination of the environment. In follow up to our recent meeting and the corrective action investigation outline previously provided to Cedar, my staff will communicate with Joe Porter (Cedar) in the near future to transmit a proposed consent administrative order for the corrective action activities.

I hope this addresses the issues raised in your June 28, 1990 letter. If further information is needed, please feel free to contact myself or Sammy Bates of my staff.

Sincerely,

A handwritten signature in dark ink, appearing to read "Mike Bates", with a stylized, cursive script.

Mike Bates
Chief
Hazardous Waste Division

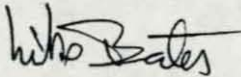
cc: Sammy Bates

MB:cw

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I hope this addresses the issues raised in your June 28, 1990 letter. If further information is needed, please feel free to contact myself or Sammy Bates of my staff.

Sincerely,



Mike Bates
Chief
Hazardous Waste Division

cc: Sammy Bates

MB:cw

Sanning

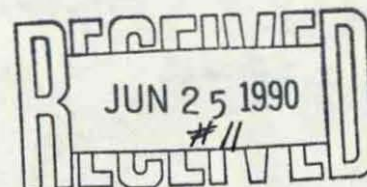
CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390
(501) 572-3701 • Fax No. 501-572-3795

CSN: 540068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES,

June 19, 1990

Mike Bates
Arkansas Department of Pollution Control & Ecology
P.O. Box 9583
8001 National Drive
Little Rock, AR



Re: Consent Administrative Order, LIS 86-027

Dear Mike:

Pursuant to the above referenced Order, a final report of installation and analysis of a groundwater monitoring well system is attached.

This report includes the following information:

1. Piezometer elevations from Aug 1988 to June 1990
2. Charts of each piezometer water level
3. Monitoring well water elevations from Aug 1989 to June 1990
4. Charts of each monitoring well water level
5. Analytical data for each monitoring well
6. Engineering report including boring logs and well descriptions.

Over the next several weeks we will be developing plans to determine the nature, extent, and cause of groundwater values. Further assessment is required to determine the relationship in different elevations of water levels and our recent findings on the plant site.

Sincerely,

Joe E. Porter
Environmental Engineer

cc: J.H. Miles
A. Malone
J.R. Tomblin

File

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444
FAX: (501) 562-4632

July 17, 1990

CSN: 5A0068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES

Allen T. Malone
Apperson, Crump, Duzane & Maxwell
Suite 2110
One Commerce Square
Memphis, TN 38103

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West Helena Plant

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Piezometer Elevation Report

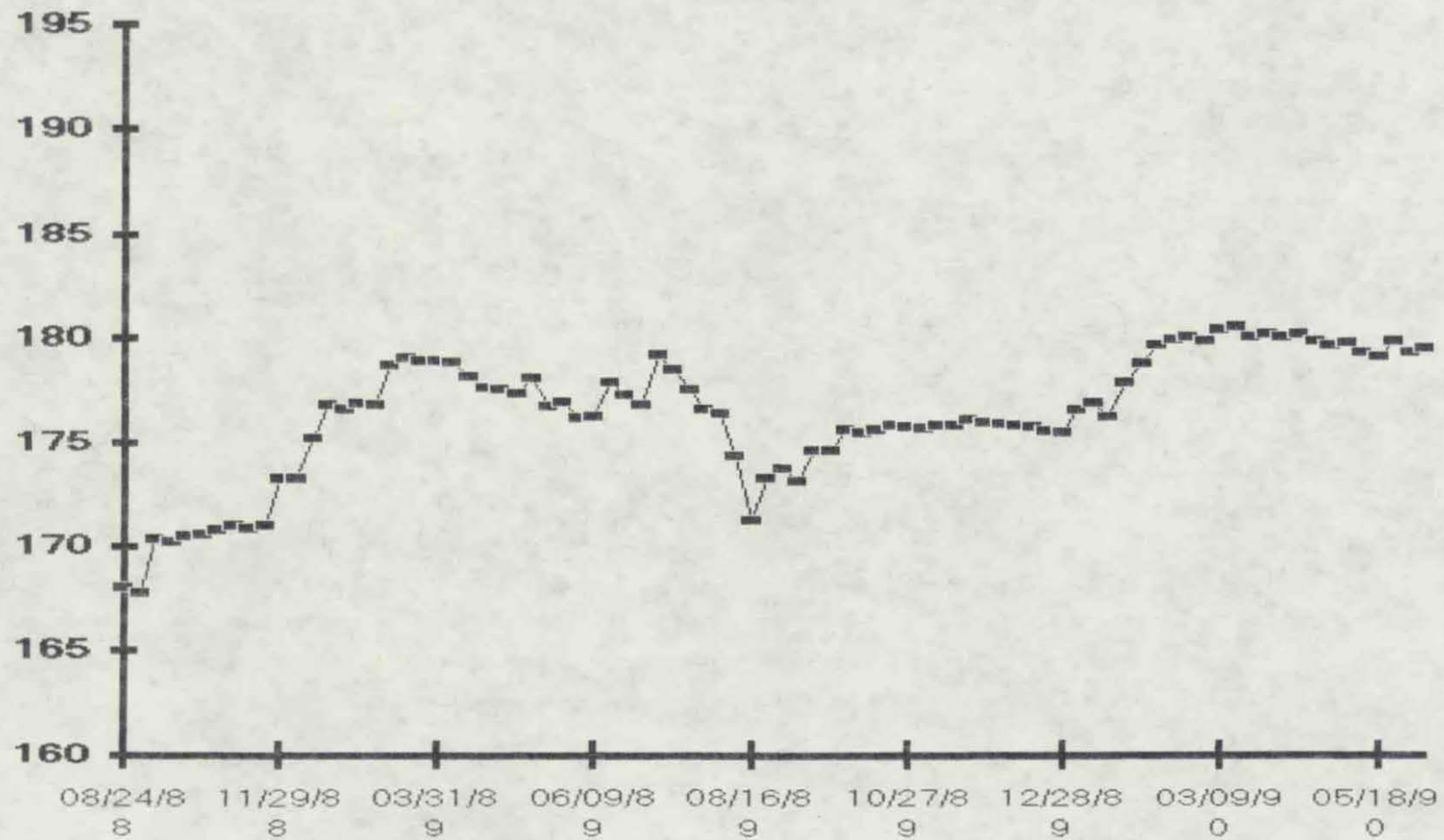
DATE	1_PIEZO	2_PIEZO	2A_PIEZO	3_PIEZO	3A_PIEZO	4_PIEZO	5_PIEZO	6_PIEZO	6A_PIEZO	7_PIEZO
08/24/88	168.02	167.90	181.81	168.10	179.11	167.29	167.48	167.37	183.06	167.30
08/30/88	167.77	167.40	181.81	168.02	179.11	168.21	167.73	167.54	182.81	167.55
09/19/88	170.35	170.15	181.81	170.52	179.11	170.46	169.89	169.87	182.15	169.89
10/07/88	170.27	170.06	181.81	170.43	179.11	170.38	169.89	169.79	181.40	169.72
10/13/88	170.52	170.15	181.81	170.52	179.11	170.54	169.89	169.96	181.31	169.80
10/21/88	170.60	170.31	181.81	170.68	179.11	170.63	170.14	170.04	181.23	169.97
10/28/88	170.77	170.48	181.73	170.85	179.11	170.79	170.23	170.29	181.65	170.14
11/04/88	171.02	170.65	181.73	171.10	179.11	171.04	170.48	170.46	167.90	170.39
11/11/88	170.85	170.56	181.73	170.93	179.11	170.88	170.31	170.29	180.06	170.22
11/18/88	171.02	170.90	181.73	171.35	179.11	171.29	170.73	170.71	181.40	170.64
11/29/88	173.27	172.90	181.73	173.18	179.11	173.21	172.48	172.54	183.98	172.47
12/16/88	173.27	172.98	181.73	173.18	179.11	173.21	172.56	172.62	183.65	172.47
01/06/89	175.18	174.81	181.73	175.18	179.11	175.29	174.48	174.54	187.23	174.39
01/20/89	176.77	176.48	181.73	176.77	179.11	176.96	176.14	176.12	188.65	176.05
01/27/89	176.60	176.15	181.73	176.43	179.11	176.63	175.81	175.79	188.65	175.72
02/02/89	176.85	176.56	181.73	176.93	179.11	177.04	176.23	176.29	189.15	176.22
02/10/89	176.77	176.48	181.73	176.85	179.11	176.96	176.23	176.21	189.81	176.05
02/24/89	178.68	178.40	181.73	178.77	179.11	178.79	178.06	178.04	190.31	178.05
03/03/89	179.02	178.73	181.73	179.10	179.11	179.13	178.48	178.46	190.90	178.47
03/10/89	178.93	178.65	181.73	179.02	179.11	179.13	178.48	178.37	190.73	178.30
03/31/89	178.93	178.65	181.73	179.02	179.11	179.29	178.48	178.37	190.06	178.39
04/07/89	178.85	178.56	181.73	179.02	179.11	179.13	178.39	178.37	190.15	178.30
04/14/89	178.18	177.98	181.73	178.35	179.11	178.46	177.81	177.71	189.40	177.72
04/21/89	177.60	177.56	181.64	177.52	179.03	177.96	177.06	177.12	188.65	176.97
04/28/89	177.52	177.48	181.64	177.77	179.03	177.79	176.98	176.96	187.90	176.89
05/05/89	177.35	176.98	181.64	177.52	179.03	177.54	176.81	176.79	187.40	176.72
05/12/89	178.10	177.65	181.64	178.18	179.03	178.21	177.48	176.37	187.48	177.39
05/19/89	176.68	176.40	181.64	176.68	179.03	176.71	175.98	175.96	187.06	175.89
05/26/89	176.92	176.43	181.31	175.90	179.13	176.98	176.01	176.04	187.80	175.97
06/02/89	176.15	175.68	181.31	176.15	179.13	176.31	175.31	175.29	187.33	175.22
06/09/89	176.20	175.68	181.31	176.15	179.13	176.31	175.26	175.29	187.08	175.22
06/16/89	177.90	177.43	181.31	177.95	179.13	178.06	177.21	177.19	188.28	177.12
06/23/89	177.25	176.83	181.31	177.30	179.13	177.46	176.46	176.39	188.18	176.42
06/30/89	176.80	176.38	181.31	176.85	179.13	177.06	176.06	175.99	187.58	175.97
07/07/89	179.20	178.83	182.76	179.45	179.18	179.46	178.76	178.59	189.13	178.52
07/14/89	178.50	178.13	182.81	178.70	179.48	178.86	178.06	177.94	189.43	177.92
07/21/89	177.50	177.08	182.21	177.60	179.43	177.81	176.81	176.69	189.18	176.72
07/28/89	176.60	176.18	181.31	176.70	179.28	176.91	175.91	175.84	188.63	175.77
08/04/89	176.40	175.98	181.31	176.55	179.13	176.76	175.86	175.79	188.53	175.77
08/11/89	174.35	173.83	181.31	174.85	179.13	175.21	174.36	174.19	187.58	174.22
08/16/89	171.30	170.98	181.31	171.35	179.13	170.51	170.36	170.09	186.28	170.22
08/25/89	173.30	172.83	181.31	173.45	179.13	173.66	172.61	172.54	185.83	172.52
09/01/89	173.75	173.33	181.31	173.85	179.13	174.06	173.01	172.99	186.28	172.92
09/08/89	173.15	172.83	181.31	173.65	179.13	173.76	173.01	172.84	185.48	172.87
09/18/89	174.65	174.23	181.31	174.85	179.13	174.96	174.11	174.04	185.28	173.97
09/22/89	174.65	174.23	181.31	174.85	179.13	173.96	174.11	174.09	184.98	174.02
10/05/89	175.60	175.13	181.31	175.75	179.13	175.86	175.01	174.94	186.23	174.92
10/13/89	175.45	175.03	181.31	175.60	179.13	175.76	174.91	174.84	185.53	174.77
10/17/89	175.60	175.13	181.31	175.70	179.13	175.86	175.01	174.94	185.48	174.87

Piezometer Elevation Report

DATE	1_PIEZO	2_PIEZO	2A_PIEZO	3_PIEZO	3A_PIEZO	4_PIEZO	5_PIEZO	6_PIEZO	6A_PIEZO	7_PIEZO
10/20/89	175.80	175.38	181.31	176.00	179.13	176.06	175.21	175.19	186.13	175.12
10/27/89	175.75	175.33	181.31	175.90	179.13	176.01	175.16	175.09	185.78	175.07
11/03/89	175.65	175.23	181.31	175.75	179.13	175.86	175.06	174.99	185.23	174.92
11/10/89	175.80	175.33	181.31	175.90	179.13	176.01	175.21	175.19	185.78	175.07
11/17/89	175.80	175.33	181.31	175.90	179.13	176.01	175.16	175.14	185.68	175.07
11/27/89	176.10	175.68	181.31	176.25	179.13	176.36	175.46	175.49	186.73	175.42
12/01/89	175.95	175.53	181.31	176.05	179.13	175.71	175.31	175.29	186.33	175.22
12/08/89	175.90	175.43	181.31	176.00	179.13	176.11	175.26	175.24	185.83	175.17
12/11/89	175.85	175.38	181.31	175.95	179.13	176.11	175.26	175.19	185.78	175.12
12/15/89	175.75	175.23	181.31	175.80	179.13	175.96	175.11	175.09	185.53	174.97
12/21/89	175.55	175.08	181.31	175.65	179.13	176.26	174.96	174.89	185.33	174.82
12/28/89	175.50	175.03	181.31	175.60	179.13	175.71	174.81	174.84	185.23	174.72
01/05/90	176.55	176.03	181.31	176.50	179.13	176.76	175.81	175.84	187.23	175.72
01/12/90	176.95	176.48	181.31	177.00	179.13	177.26	176.31	176.29	187.93	176.17
01/19/90	176.25	176.68	181.31	177.30	179.13	177.51	176.56	176.59	188.23	176.47
01/26/90	177.90	177.43	181.31	178.00	179.13	178.21	177.26	177.24	188.93	177.17
02/02/90	178.80	178.33	181.31	178.85	179.13	179.06	178.11	178.09	189.53	178.02
02/08/90	179.70	179.28	182.21	179.85	179.28	179.96	179.06	179.04	190.13	178.97
02/16/90	179.95	179.53	182.66	180.05	179.73	180.26	179.36	179.29	190.28	179.27
02/23/90	180.10	179.68	180.86	180.20	179.88	180.46	179.51	179.44	190.58	179.42
03/02/90	179.85	179.48	182.86	180.00	180.13	180.21	179.31	179.24	190.53	179.22
03/09/90	180.45	180.03	183.16	180.50	180.28	180.81	179.86	179.79	190.63	179.77
03/19/90	180.55	180.23	183.26	180.75	180.38	181.06	180.06	179.94	190.73	179.92
03/23/90	180.05	179.73	183.66	181.25	180.48	180.56	179.56	179.44	190.33	179.47
03/30/90	180.25	179.88	183.41	180.45	180.73	180.76	179.76	179.59	190.43	179.62
04/06/90	180.05	179.73	183.46	180.25	180.63	180.56	179.61	179.44	190.03	179.42
04/12/90	180.20	179.83	183.56	180.40	180.78	180.66	179.66	179.54	190.03	179.57
04/19/90	179.90	179.53	183.31	180.10	181.18	180.31	179.41	179.29	189.98	179.27
04/26/90	179.70	179.33	183.06	179.90	181.48	180.06	179.21	179.04	189.88	179.07
05/07/90	179.80	179.48	183.26	180.00	181.73	180.11	179.31	179.19	189.83	179.17
05/11/90	179.35	179.03	182.91	179.55	181.63	179.71	178.86	178.69	189.38	178.72
05/18/90	179.15	178.83	182.46	179.35	181.63	179.51	178.66	178.54	189.13	178.52
05/24/90	179.90	179.53	183.61	180.05	182.08	180.26	179.36	179.24	189.78	179.22
06/01/90	179.35	179.03	182.66	179.55	181.98	179.71	178.86	178.74	189.13	178.72
06/08/90	179.50	179.13	182.56	179.70	182.03	179.81	179.01	178.89	189.18	178.87
Average f	176.36	176.00	181.84	176.49	179.50	176.59	175.80	175.73	187.08	175.69
	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====

Cedar Chemical Corporation

Piezometer 1



Cedar Chemical Corporation

Piezometer 2

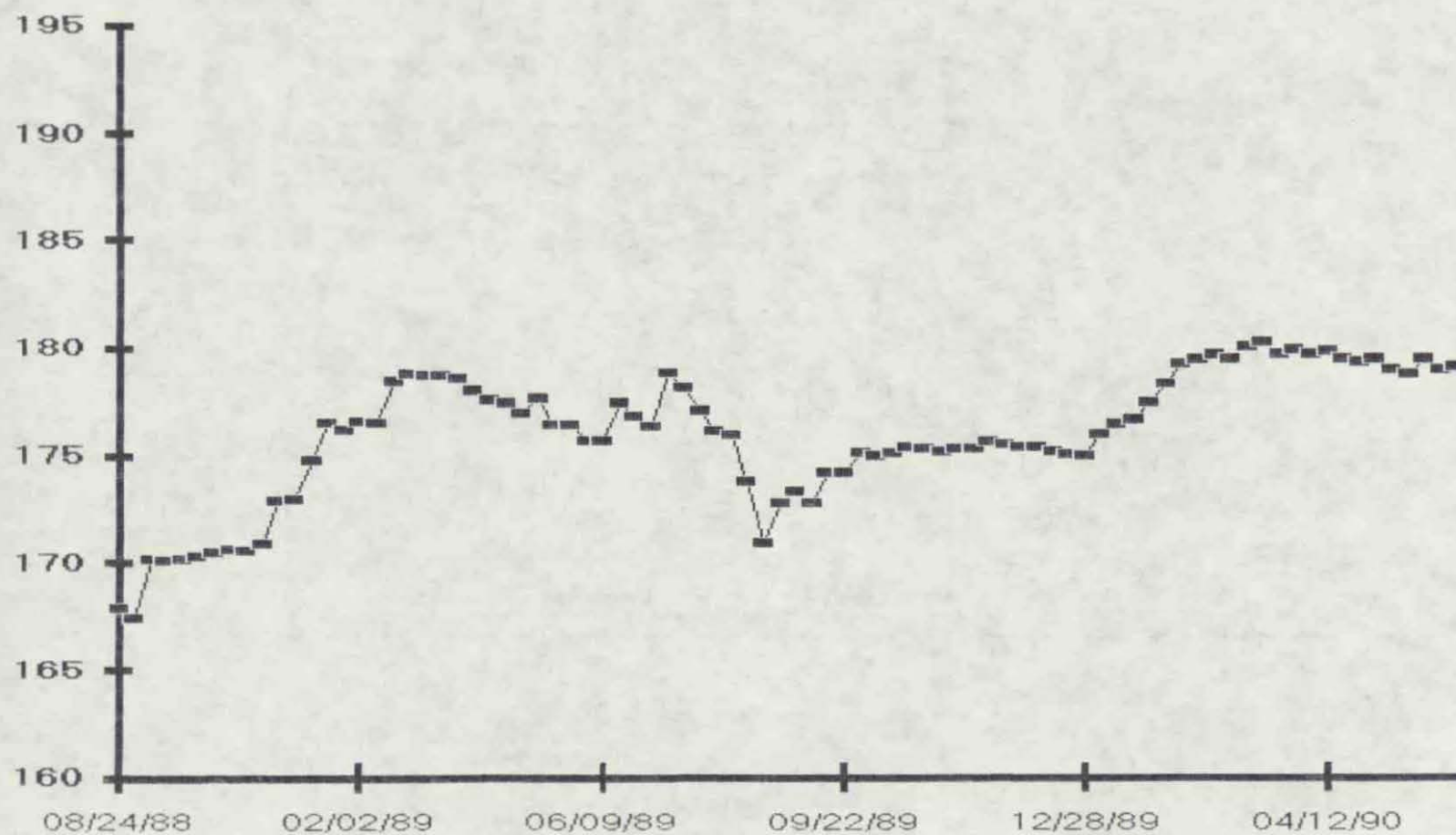


Chart4

Piezometer 2A

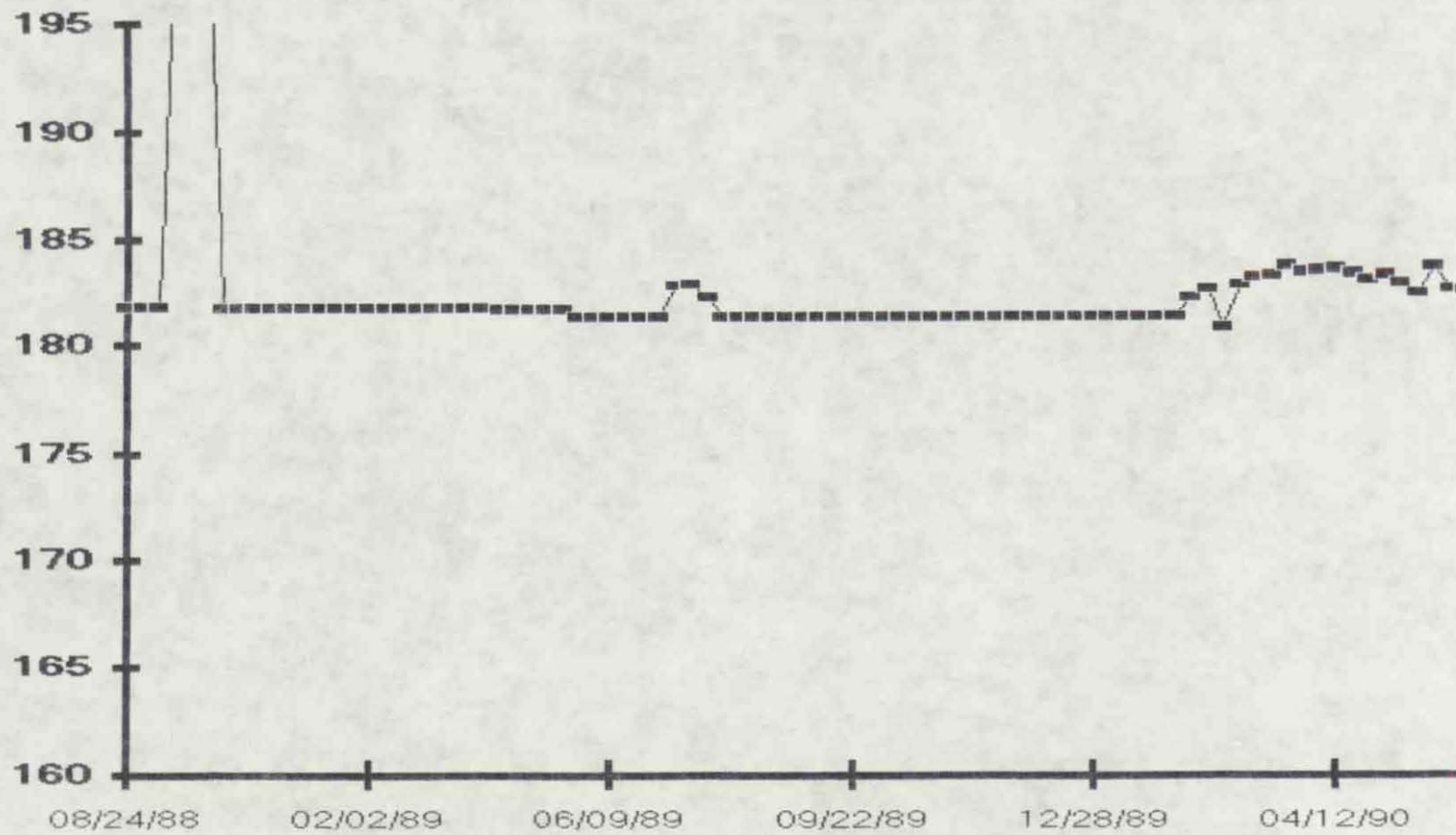


Chart5

Piezometer 3

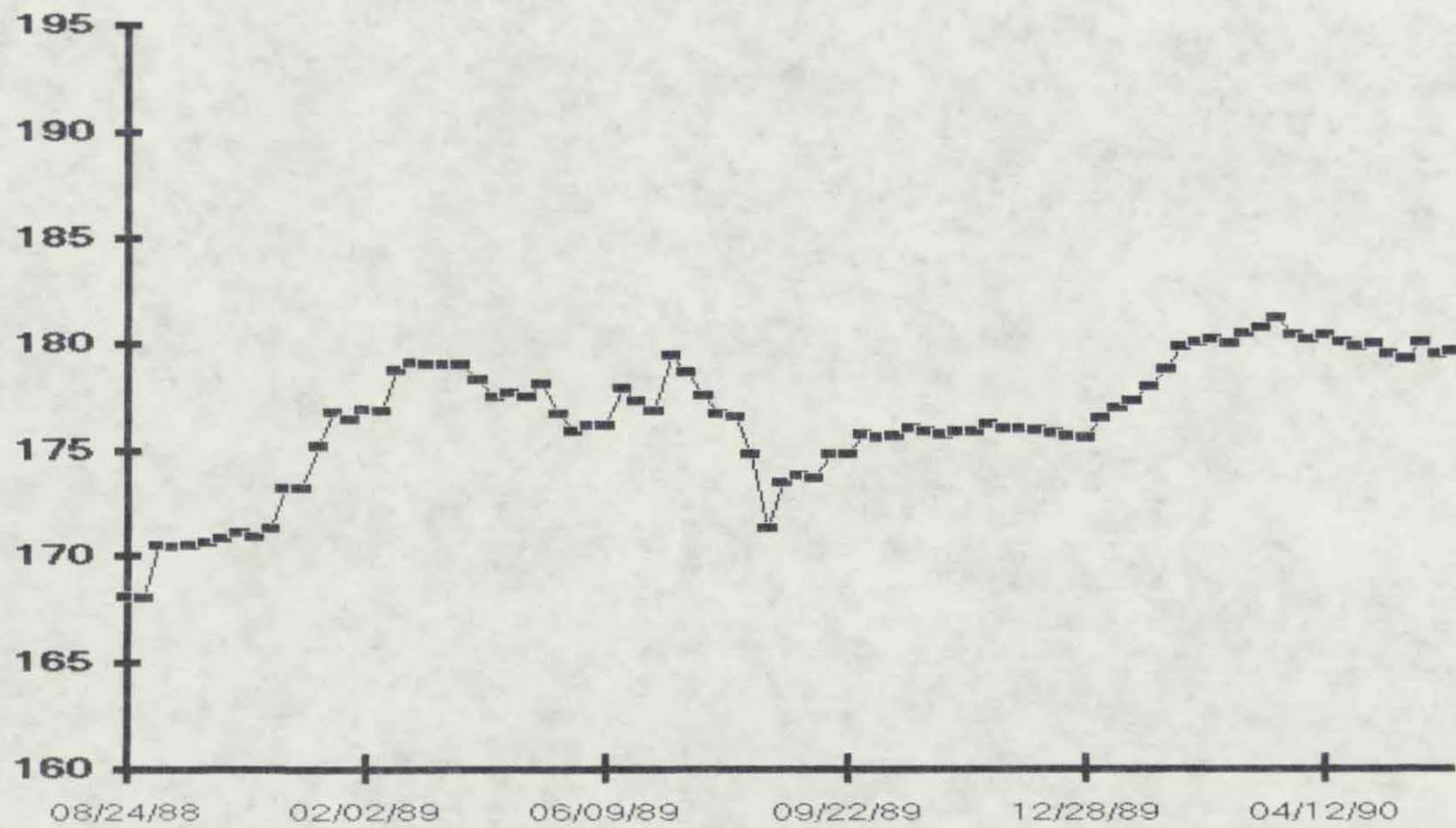


Chart6

Piezometer 3a

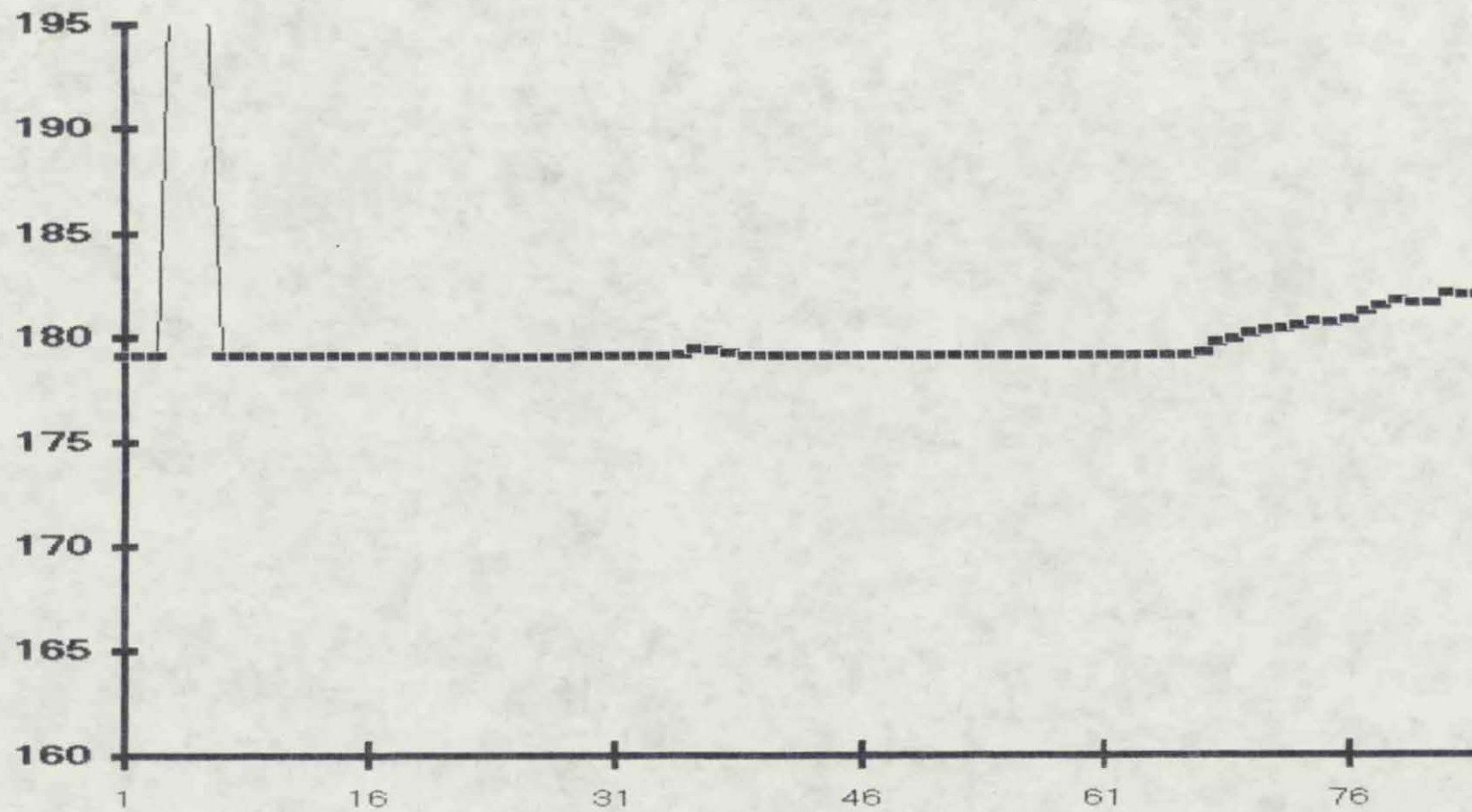


Chart7

Piezometer 4

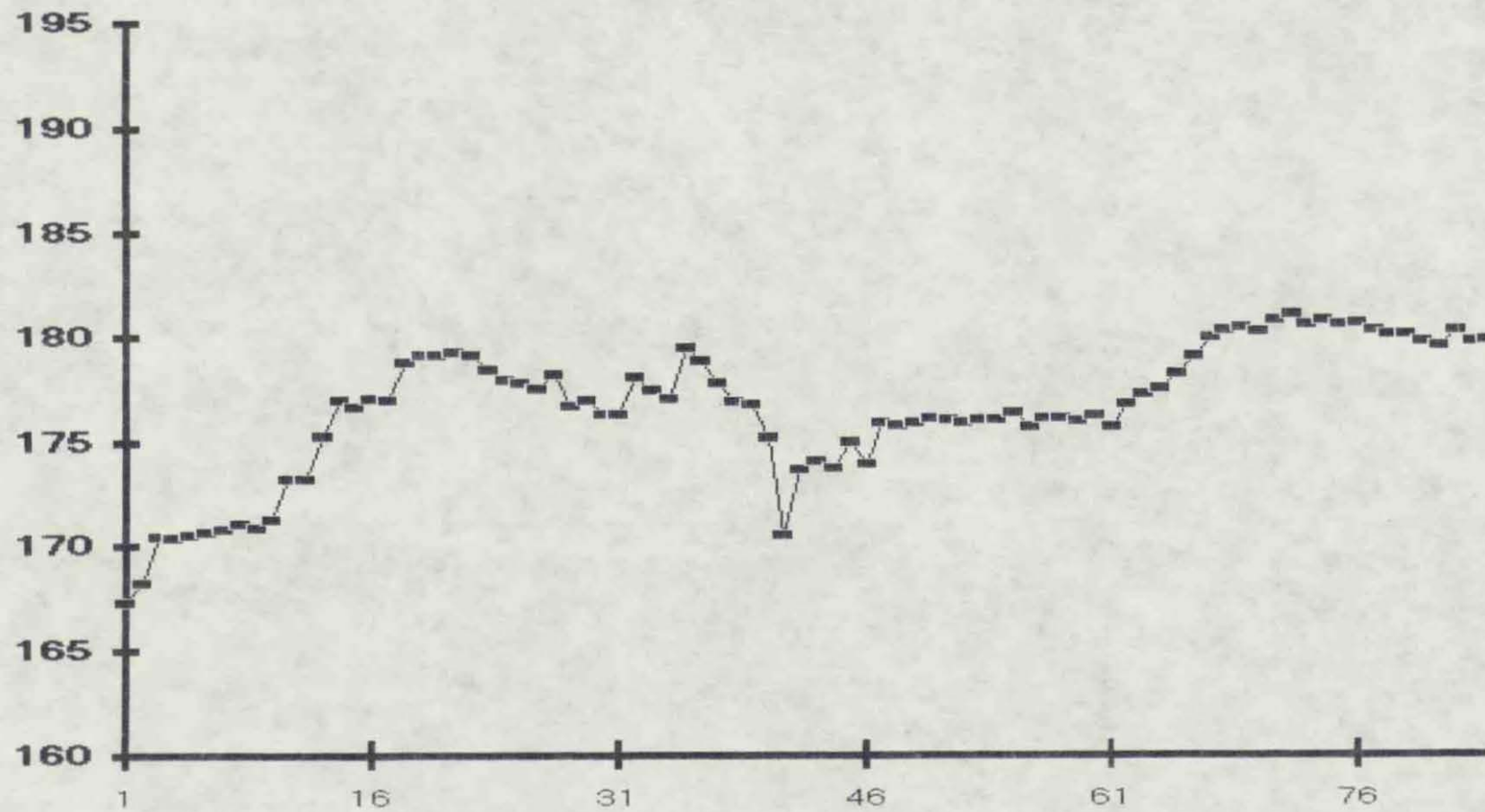


Chart8

Piezometer 5

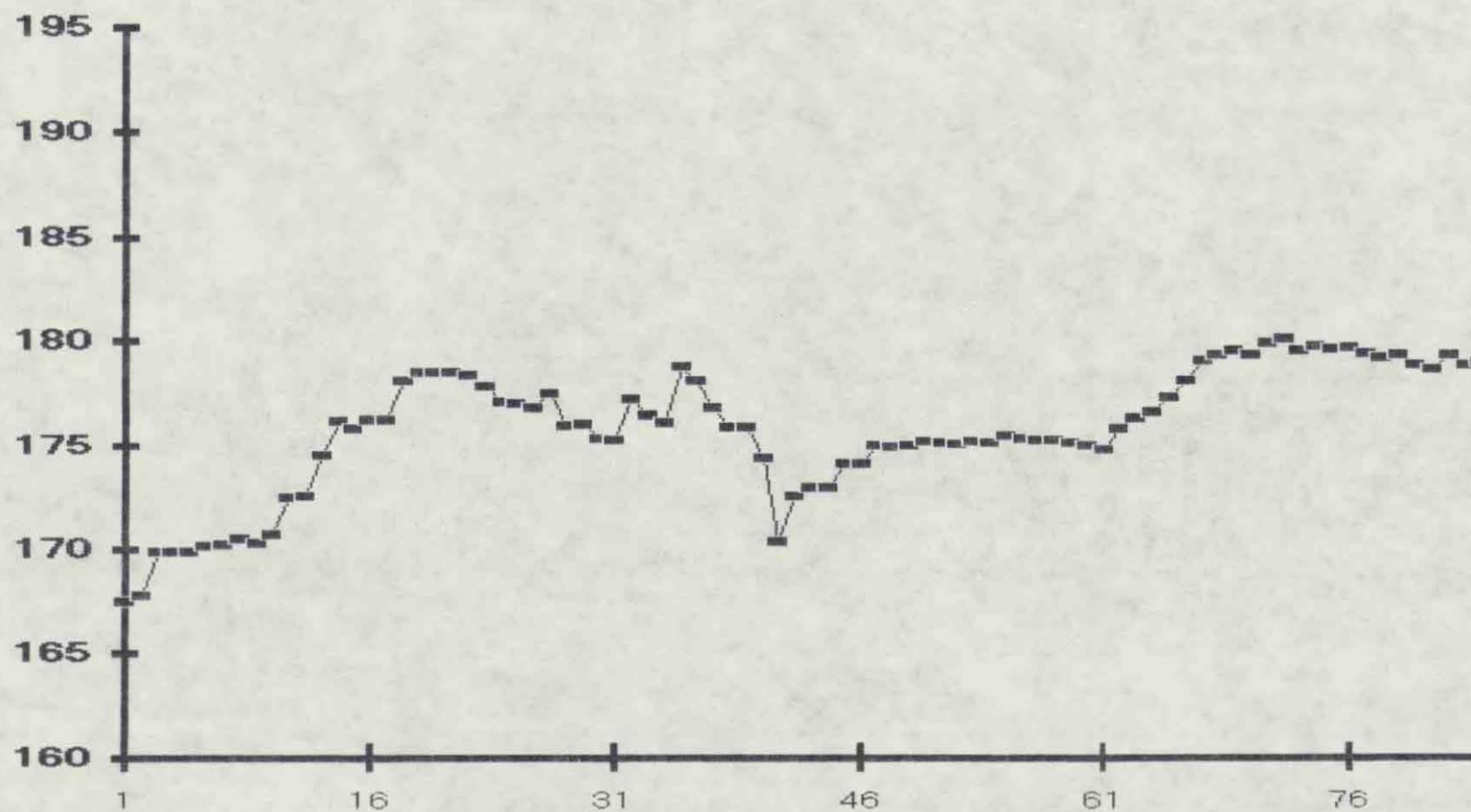
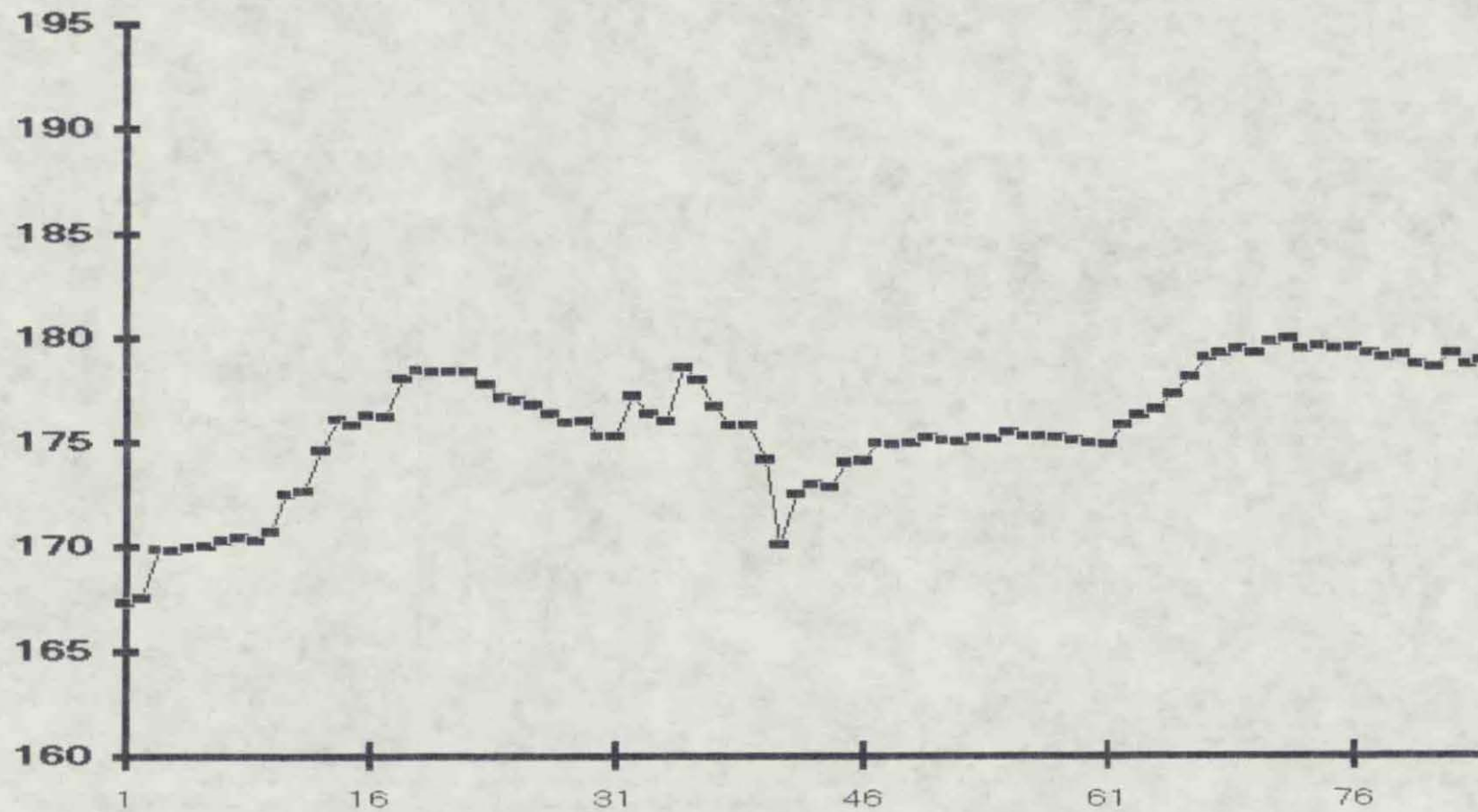


Chart9

Piezometer 6



Piezometer 6A

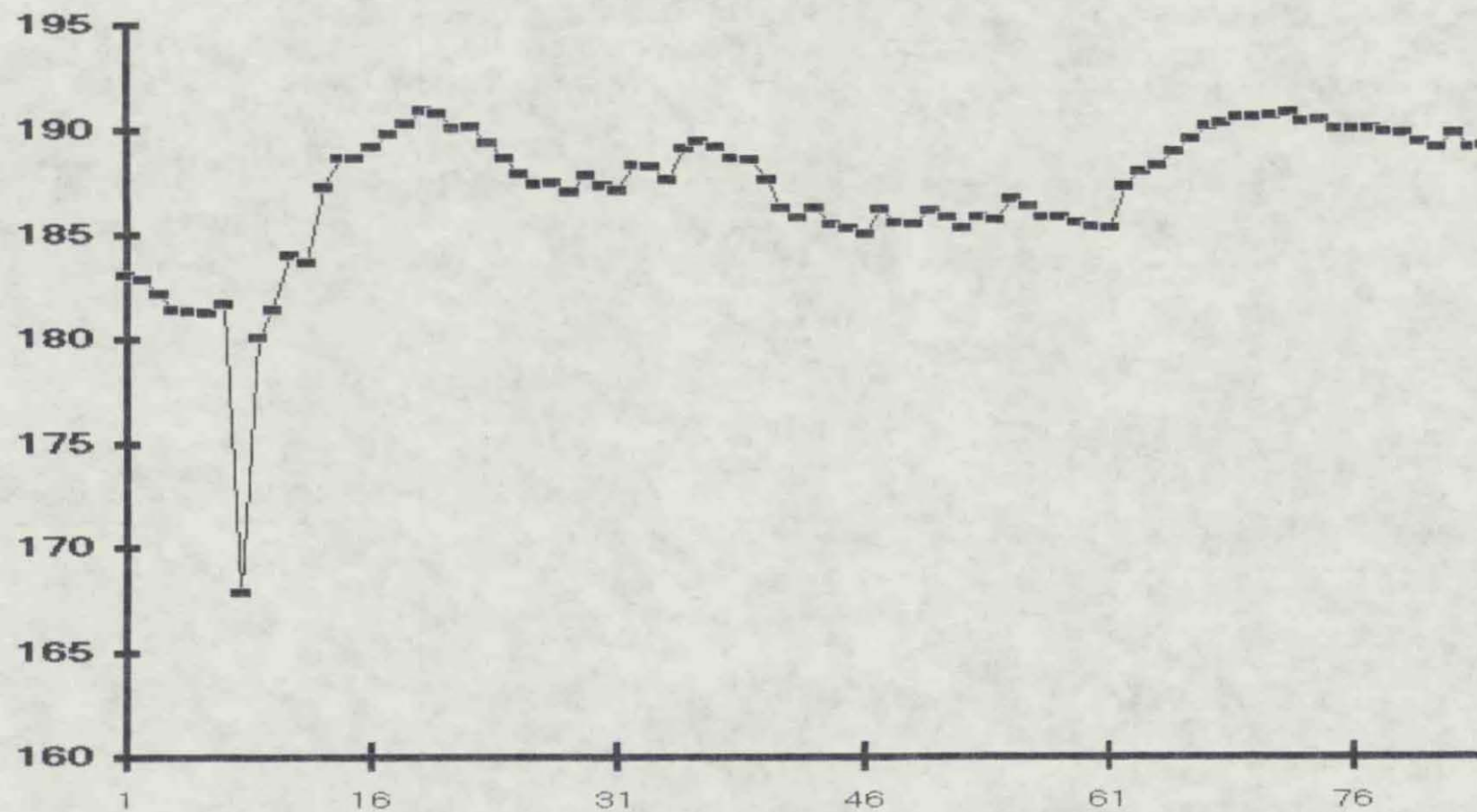
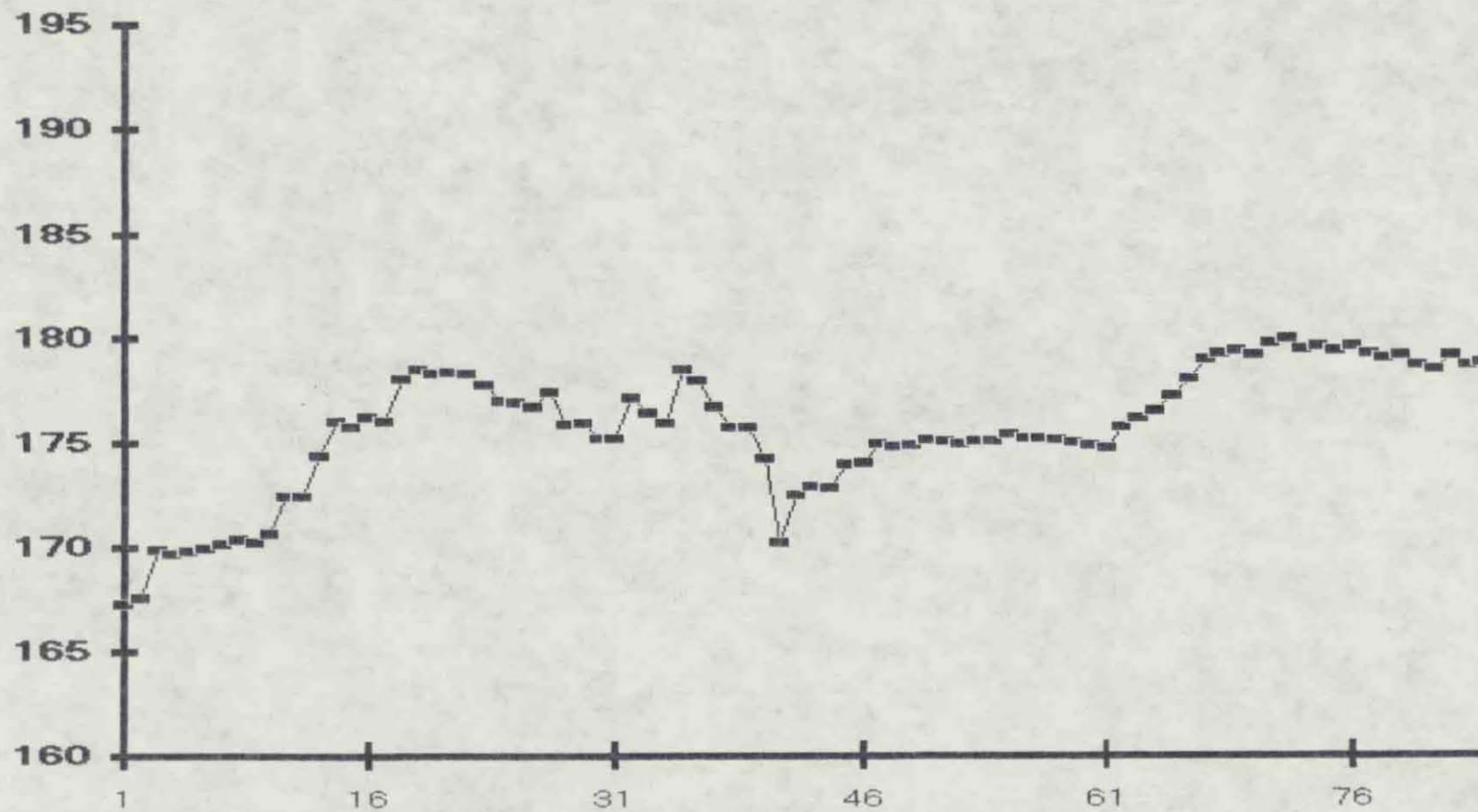


Chart11

Piezometer 7

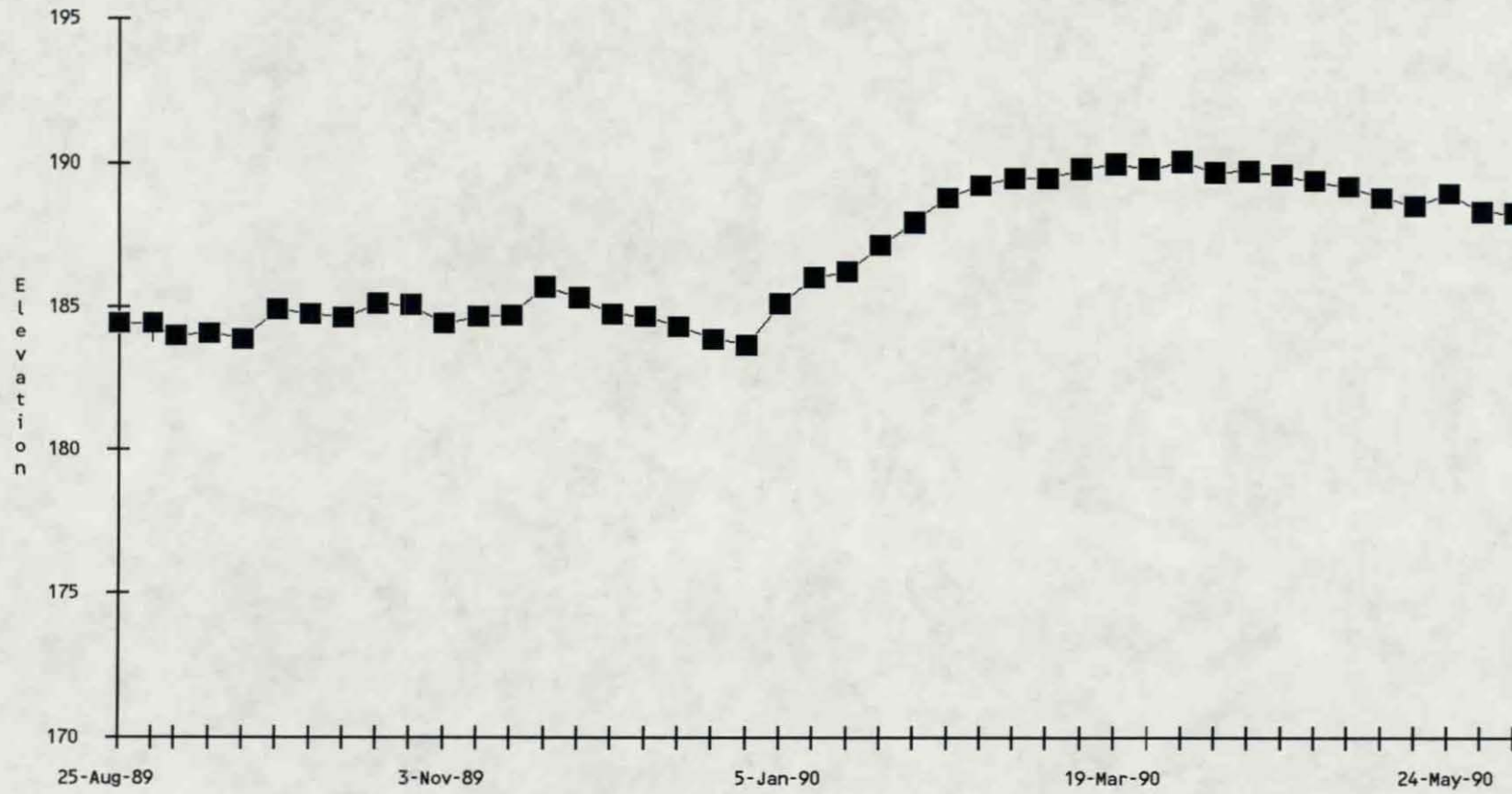


Cedar Chemical Corporation

DATE	MW_1	MW_2	MW_3	MW_4	MW_6	MW_6A	MW_6B	MW_6C	MW_7
08/25/89	184.43	172.86	172.48	184.68	172.04	172.08	185.53	185.64	172.32
09/01/89	184.43	173.31	172.88	184.88	172.49	172.48	186.03	186.14	172.77
09/08/89	183.98	172.91	172.68	184.28	172.34	172.38	185.23	185.34	172.72
09/18/89	184.08	174.21	173.88	184.18	173.54	173.53	184.98	185.09	173.82
09/22/89	183.88	174.21	173.88	183.93	174.54	173.58	184.73	184.74	173.87
10/05/89	184.93	175.11	174.78	185.08	174.49	174.48	186.03	186.09	174.72
10/13/89	184.78	175.01	174.63	184.63	174.34	174.38	185.28	185.34	174.62
10/17/89	184.63	175.11	174.73	184.48	174.44	174.48	185.33	185.34	174.52
10/20/89	185.13	175.36	174.98	184.93	174.69	174.68	185.93	185.99	174.92
10/27/89	185.08	175.26	174.93	184.78	174.59	174.63	185.53	185.59	174.92
11/03/89	184.43	175.16	174.83	184.18	174.49	174.53	184.98	185.04	174.77
11/10/89	184.68	175.31	174.98	184.58	174.64	174.68	185.58	185.64	174.92
11/17/89	184.73	175.26	174.93	184.53	174.64	174.68	185.48	185.54	174.92
11/27/89	185.73	175.61	175.28	185.63	174.99	174.98	186.53	186.64	175.22
12/01/89	185.33	175.46	175.08	185.28	174.79	174.83	186.08	186.19	175.07
12/08/89	184.78	175.36	175.03	184.83	174.74	174.73	185.53	185.64	175.02
12/11/89	184.68	175.31	174.98	184.78	174.74	174.73	185.53	185.59	174.97
12/15/89	184.33	175.16	174.83	184.53	174.59	174.58	185.23	185.34	174.82
12/21/89	183.88	175.01	174.68	184.28	174.39	174.43	185.08	185.14	174.67
12/28/89	183.68	174.96	174.63	184.23	174.29	174.33	184.98	185.04	174.57
01/05/90	185.13	175.96	175.63	186.33	175.34	175.38	186.98	187.09	175.57
01/12/90	186.03	176.41	176.08	187.43	175.79	175.83	187.68	187.79	176.02
01/19/90	186.23	176.71	176.38	187.73	176.09	176.08	187.93	188.04	176.27
01/26/90	187.18	177.36	177.03	188.43	176.74	176.78	188.63	188.79	177.02
02/02/90	187.98	178.26	177.93	189.03	177.64	177.63	189.23	189.34	177.87
02/08/90	188.83	179.21	178.88	189.73	178.49	178.53	189.83	189.94	178.82
02/16/90	189.28	180.46	179.13	189.93	178.79	178.78	190.03	190.04	179.07
02/23/90	189.53	179.61	179.28	190.28	178.89	178.93	190.28	190.39	179.22
03/02/90	189.53	179.41	179.08	190.18	178.69	178.73	190.23	190.34	179.02
03/09/90	189.83	180.01	179.63	190.88	179.29	179.33	190.33	190.44	179.57
03/19/90	190.03	180.21	179.83	191.38	179.44	179.43	190.43	190.54	179.77
03/23/90	189.83	179.66	178.88	190.83	178.89	178.98	190.08	190.14	179.27
03/30/90	190.08	179.81	179.48	191.08	179.09	179.13	190.13	190.24	179.47
04/06/90	189.73	179.66	179.33	190.58	178.94	178.98	189.78	189.84	179.27
04/12/90	189.78	179.76	179.48	190.63	179.04	179.08	189.78	189.84	179.37
04/19/90	189.63	179.51	179.18	190.43	178.74	178.78	189.73	189.84	179.12
04/26/90	189.43	179.31	178.98	190.08	178.54	178.58	189.58	189.69	178.92
05/07/90	189.23	180.41	179.08	190.03	178.69	178.68	189.58	189.69	179.02
05/11/90	188.83	178.96	178.63	189.48	178.19	178.23	189.08	189.19	178.57
05/18/90	188.53	178.76	178.43	189.18	178.04	178.08	188.88	188.94	178.42
05/24/90	188.98	179.51	179.18	189.83	178.74	178.78	189.53	189.59	179.07
06/01/90	188.33	178.96	178.63	189.13	178.24	178.28	188.88	188.94	180.57
06/08/90	188.28	179.11	178.78	189.13	178.39	178.38	188.93	189.04	178.72

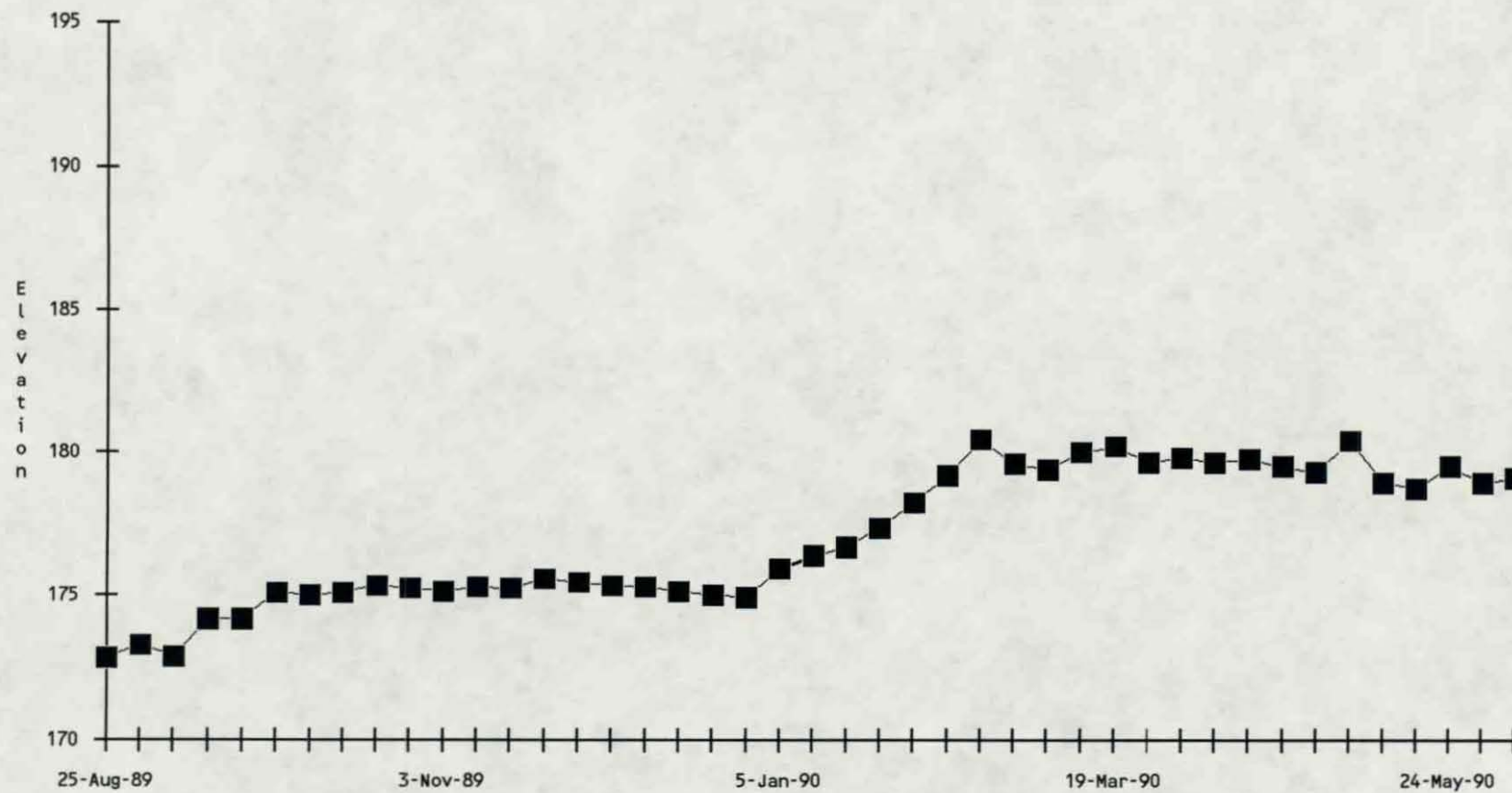
Cedar Chemical Corporation

Monitoring Well 1

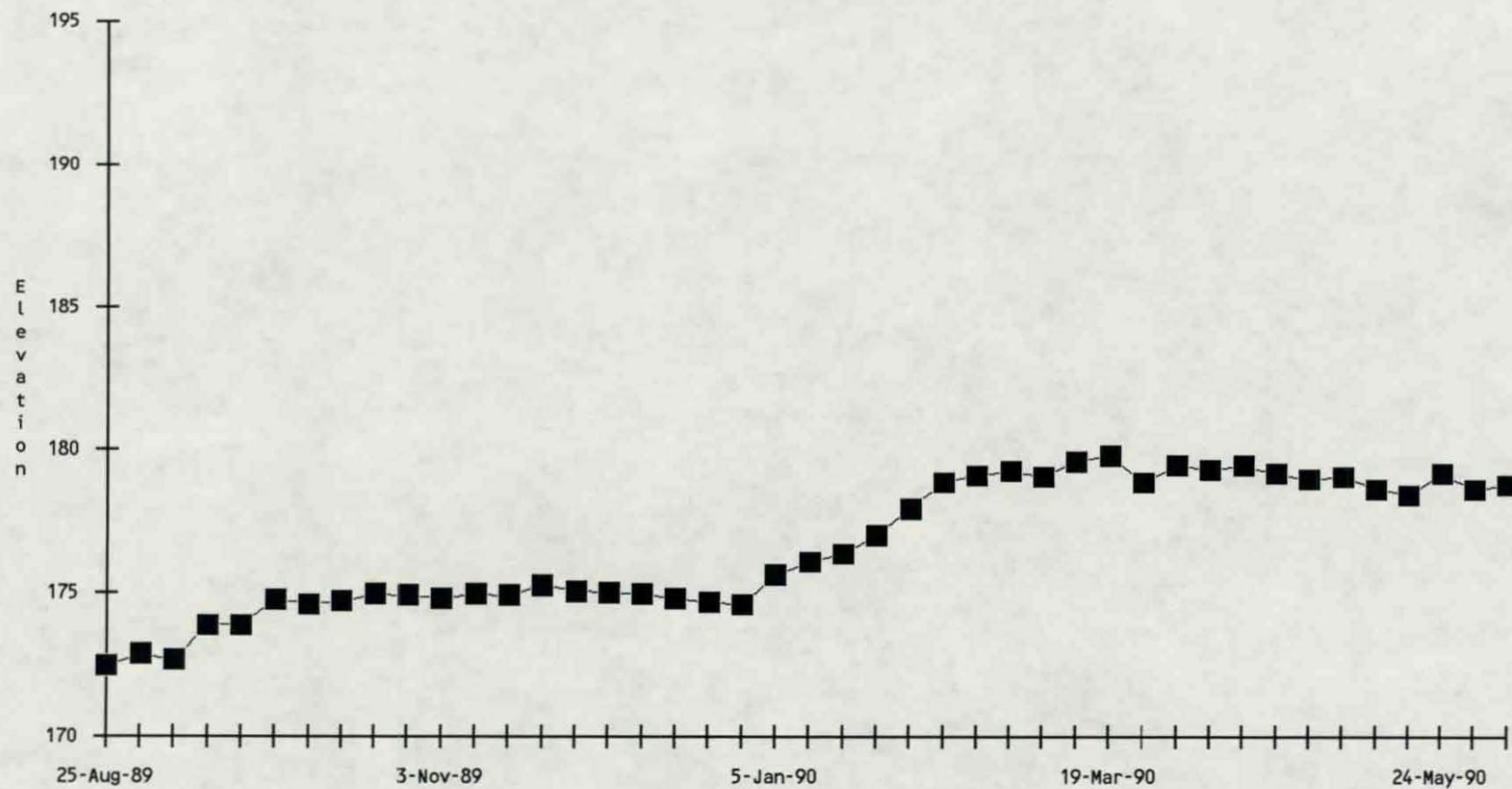


Cedar Chemical Corporation

Monitoring Well 2

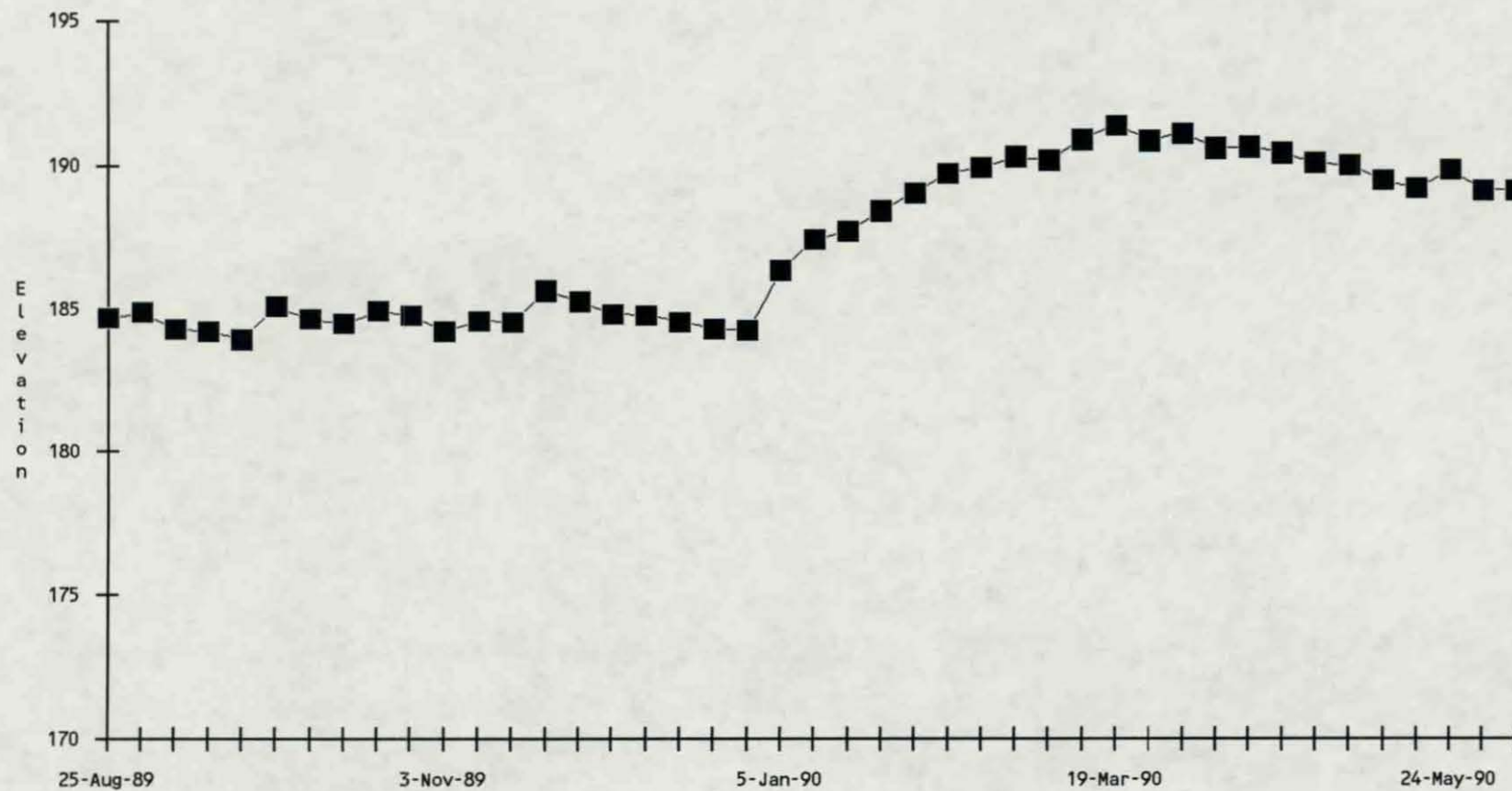


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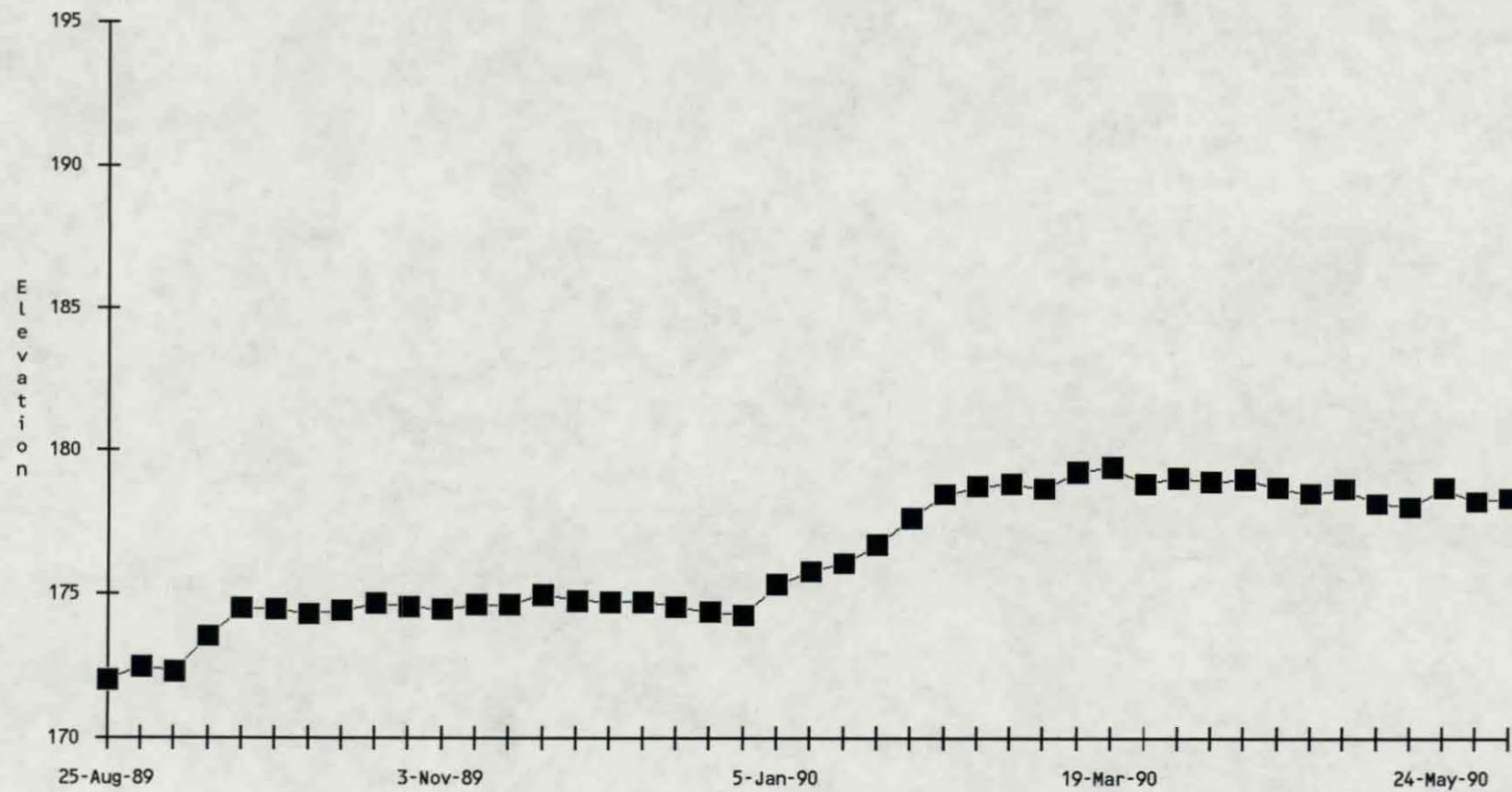
Cedar Chemical Corporation

Monitoring Well 4



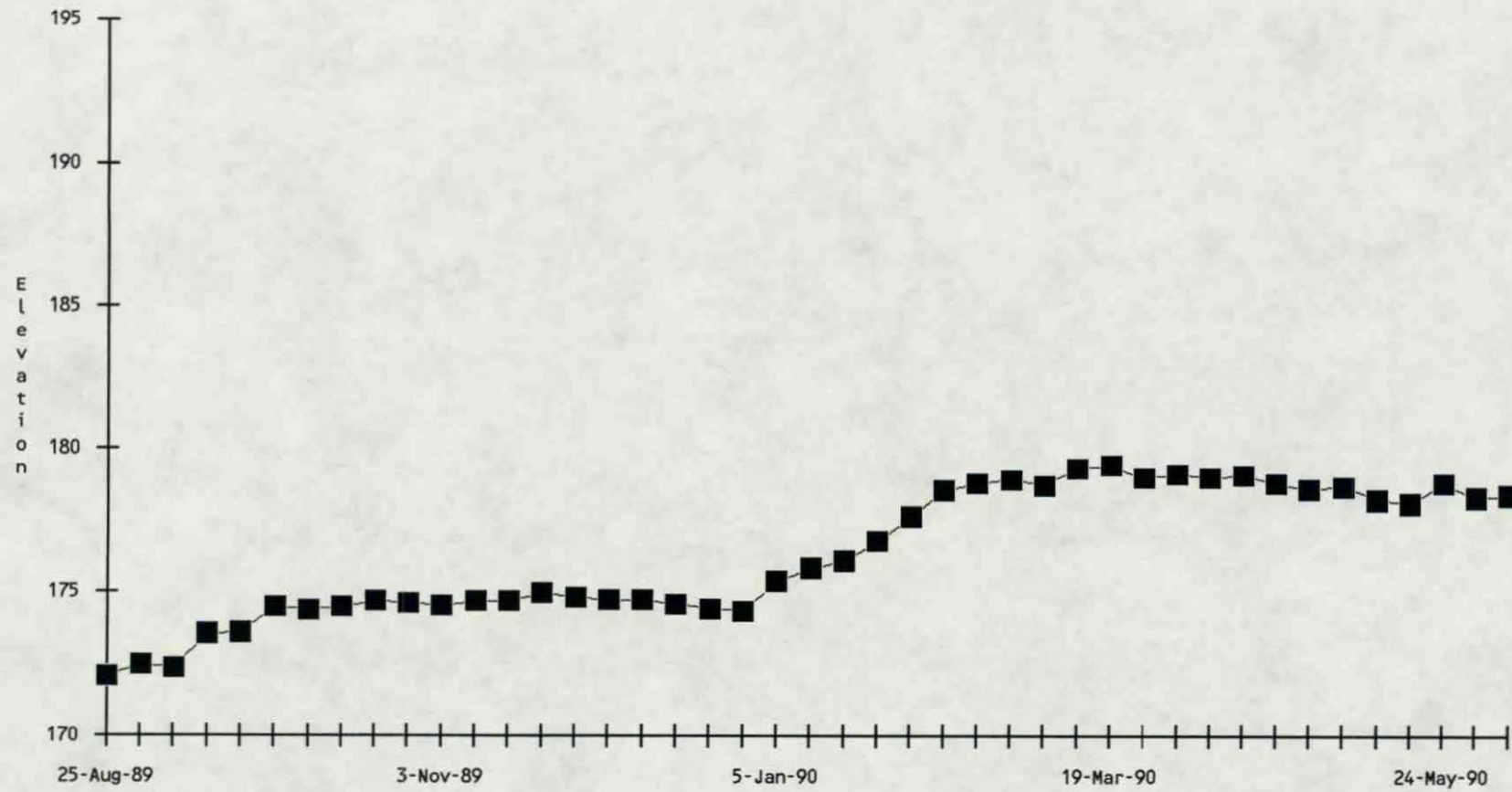
Cedar Chemical Corporation

Monitoring Well 6



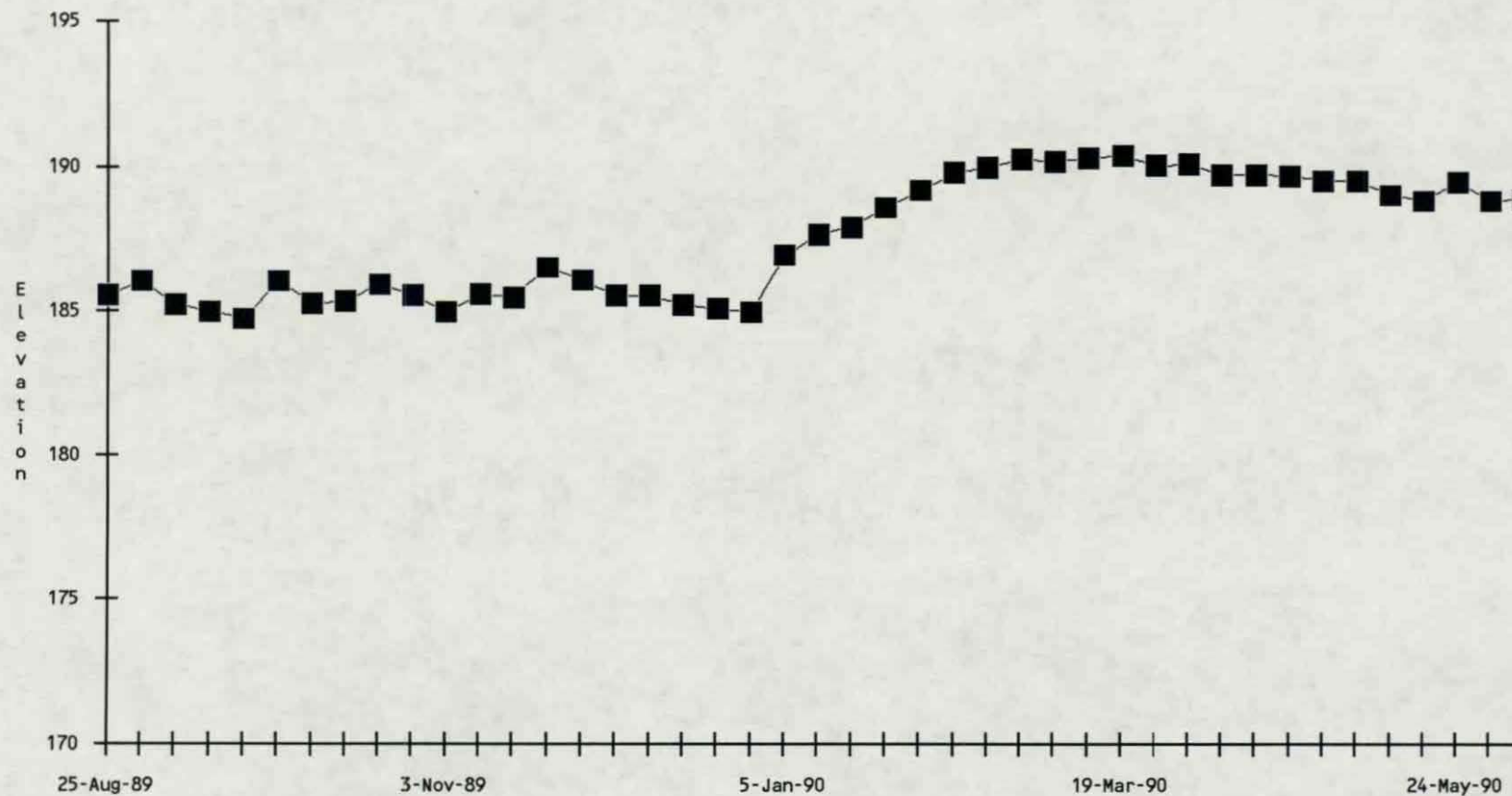
Cedar Chemical Corporation

Monitoring Well 6A



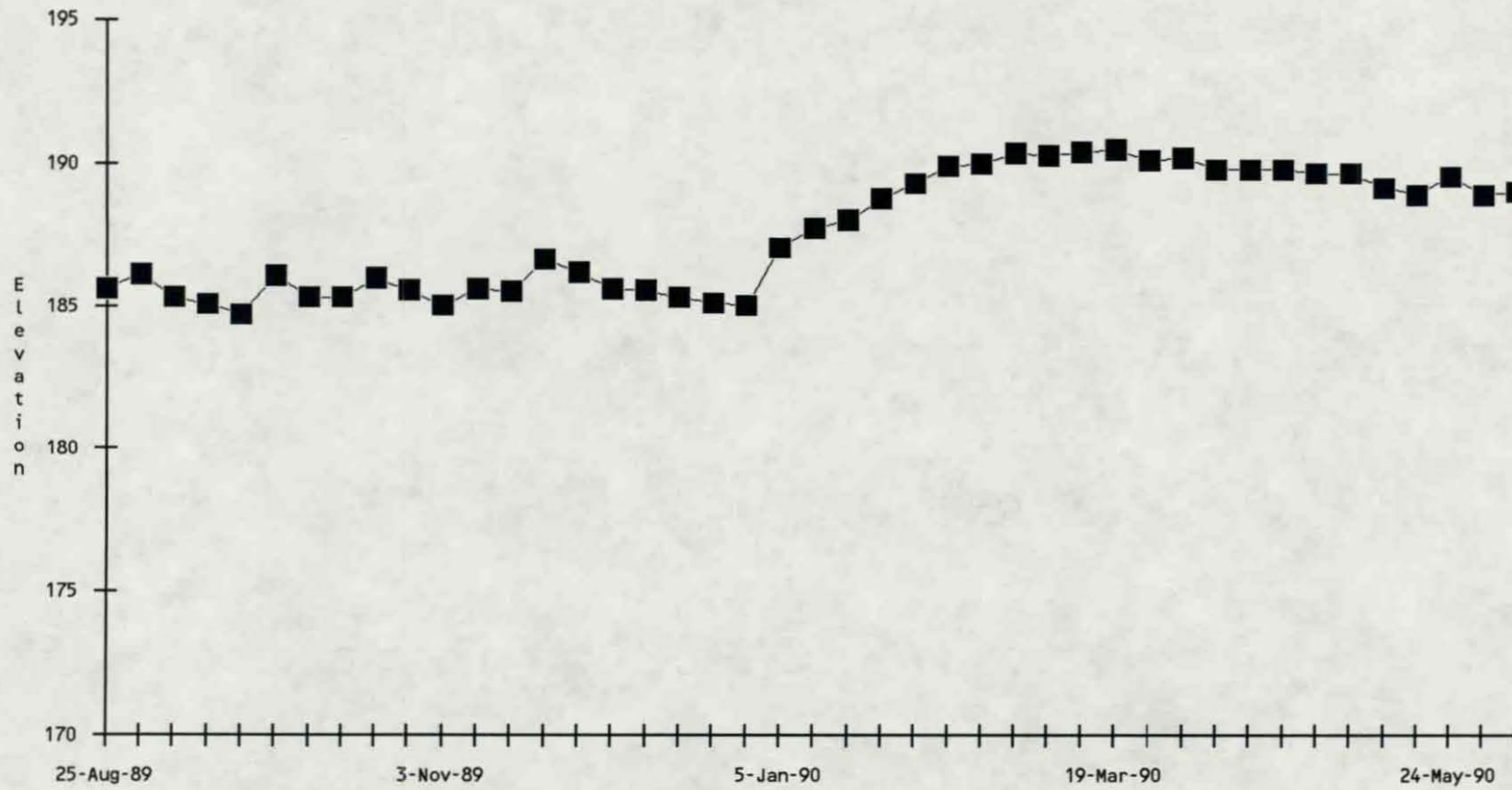
Cedar Chemical Corporation

Monitoring Well 6B



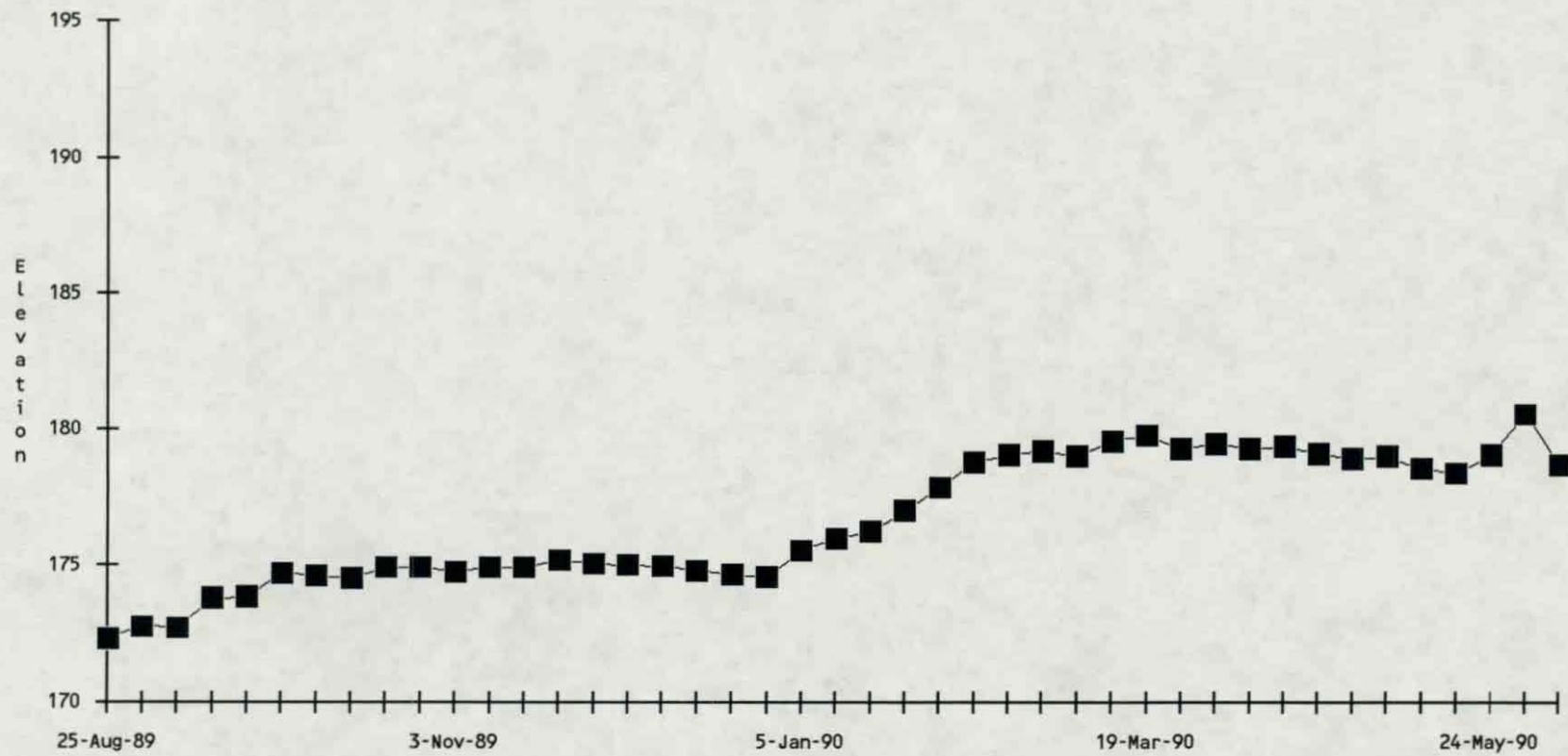
Cedar Chemical Corporation

Monitoring Well 6C



Cedar Chemical Corporation

Monitoring Well 7



Cedar Chemical Corporation - Monitoring Well Analysis Report Summary

Date	Well	pH	Spec	Cond	TOH	TOC	Comment

10/17/89	1	6.71	1850	0.783	4.59		
10/17/89	1			0.765	4.64		Field Duplicate
12/11/89	1	7.28	1900	0.657	4.96		
02/16/90	1	7.38	2000	0.648	5.72		
04/26/90	1	6.94	2000	0.988	4.76		

Average for 1		7.07	1937	0.768	4.93		
10/17/89	2	6.58	860	0.037	2.06		
12/11/89	2	7.42	900	0.065	1.74		
12/11/89	2			0.077	3.10		Field Duplicate
02/16/90	2	7.81	850	0.020	2.74		
04/26/90	2	7.18	800	0.167	1.93		

Average for 2		7.24	852	0.073	2.31		
10/17/89	3	6.39	4500	6.570	38.40		
12/11/89	3	6.66	3250	4.970	26.20		
02/16/90	3			3.360	24.44		Field Duplicate
02/16/90	3	6.70	3500	4.370	24.97		
04/26/90	3	6.43	4500	6.890	36.01		

Average for 3		6.54	3937	5.232	30.00		
10/17/89	4	6.82	2800	1.840	10.10		
12/11/89	4	7.42	2500	1.780	9.72		
02/16/90	4	7.49	2900	1.970	12.63		
04/26/90	4			2.153	12.51		Field Duplicate
04/26/90	4	7.32	2600	2.059	11.72		

Average for 4		7.26	2700	1.960	11.33		
10/17/89	6	7.56	1100	0.081	3.64		
12/11/89	6	7.77	1000	0.273	19.34		
02/16/90	6	8.00	1100	0.053	22.80		
04/26/90	6	7.69	1100	0.089	13.56		

Average for 6		7.75	1075	0.124	14.83		
10/17/89	6A	7.76	700	0.201	2.31		
12/11/89	6A	7.52	700	0.035	2.37		
02/16/90	6A	7.71	760	0.062	2.81		
04/26/90	6A	7.46	775	0.072	2.94		

Average for 6A		7.61	733	0.092	2.60		

Cedar Chemical Corporation - Monitoring Well Analysis Report Summary

Date	Well	pH	Spec	Cond	TOH	TOC	Comment
10/17/89	6B	7.33	3500		39.100	85.90	
12/11/89	6B	7.46	3100		31.500	84.70	
02/16/90	6B	7.37	3900		44.000	19.99	
04/26/90	6B	7.23	3000		33.900	71.82	
Average for 6B		7.34	3375		37.125	65.60	
10/17/89	6C	7.43	2100		50.800	78.70	
12/11/89	6C	7.54	2100		44.800	74.80	
02/16/90	6C	7.07	2100		12.200	101.80	
04/26/90	6C	7.04	2000		24.400	66.63	
Average for 6C		7.27	2075		33.050	80.48	
10/17/89	7	7.62	840		0.602	7.50	
12/11/89	7	7.83	850		0.979	8.77	
02/16/90	7	8.08	960		3.500	14.03	
04/26/90	7	7.65	1500		7.280	10.36	
Average for 7		7.79	1037		3.090	10.16	
10/17/89	F Blan				0.023	1.23	
12/11/89	F Blan				0.029	0.66	
02/16/90	F Blan				0.022	2.24	
04/26/90	F Blan				0.141	1.77	
Average for F Bl		0.00	0		0.053	1.47	



10501 Stagecoach Road P.O. Box 5239 Little Rock, AR 72215 501-455-2536 Fax: (501) 455-4137

January 2, 1990
LR89-237

Cedar Chemical Corporation
P. O. Box 2749
West Helena, AR 72390

Attention: Mr. Joe Porter

RE: Monitoring Well Installation
Cedar Chemical Company
West Helena, Arkansas

Gentlemen:

Attached are the logs of the monitoring wells installed for the Cedar Chemical Company in West Helena, Arkansas. The well locations are shown on Plate 1. Soil stratigraphy and results of field tests are summarized on the log forms, Plates 2 through 10. The well completion diagrams are shown on the right-hand portion of the log forms.

The monitoring wells were installed using a potable water supply. Decontamination procedures were used between wells. The wells were each developed using an engine-driven compressor.

If you have any questions regarding this data or installation procedures, please contact us.

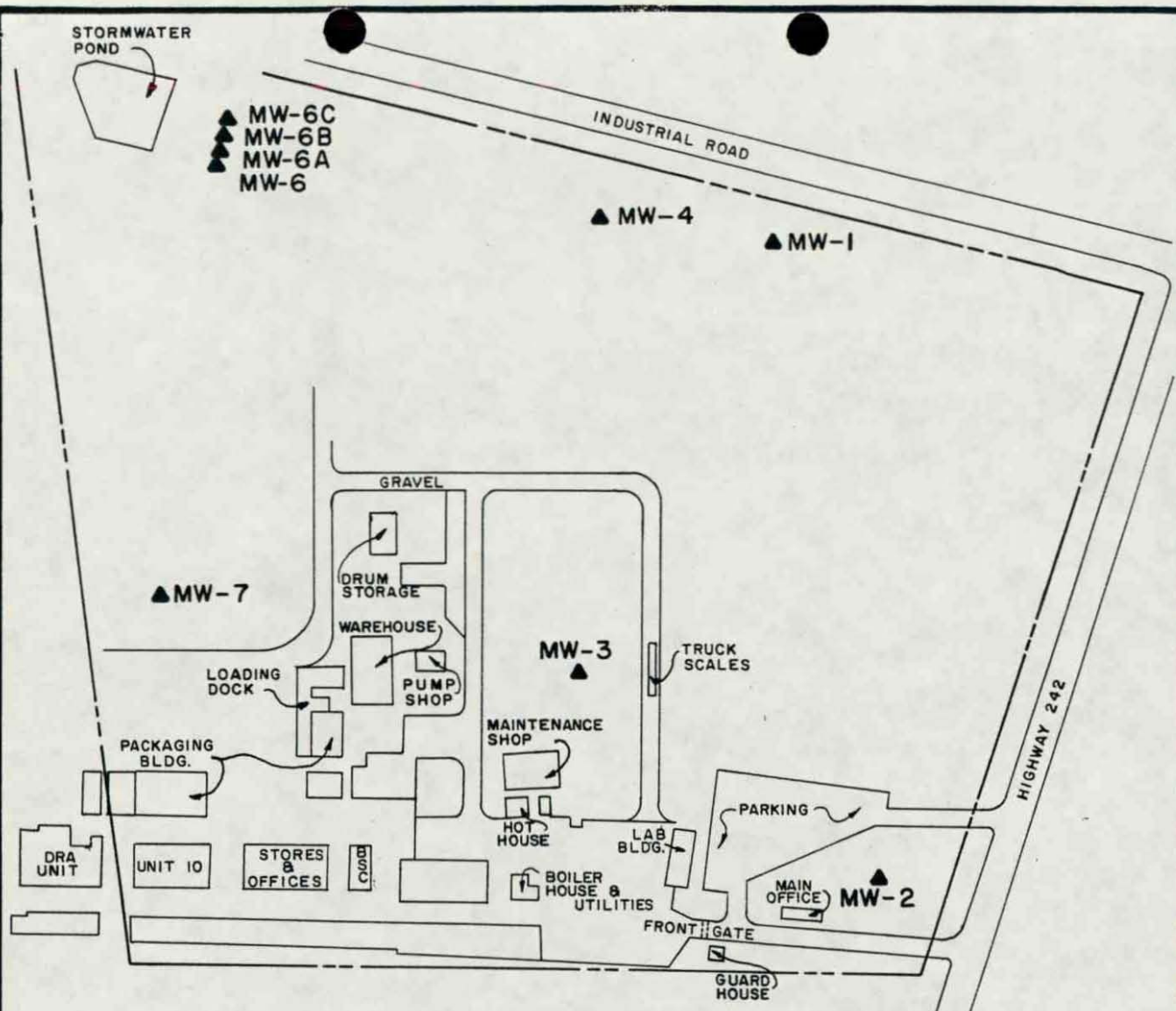
Very truly yours,

GRUBBS, GARNER & HOSKYN, INC.

Richard E. Ackley, P.E.

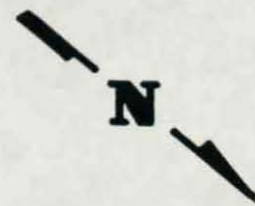
REA/jj

Copies Submitted: Cedar Chemical Corporation (3)
Attn: Mr. Joe Porter



MONITOR WELL LOCATIONS

CEDAR CHEMICAL COMPANY
WEST HELENA, ARKANSAS



SCALE
1" = 170'

LOG OF MONITOR WELL NO. 1

Cedar Chemical Company
West Helena, Arkansas

TYPE: Auger to 13.5 ft & Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT						
						0.2	0.4	0.6	0.8	1.0	1.2	1.4
						PLASTIC LIMIT			WATER CONTENT, %			LIQUID LIMIT
						10	20	30	40	50	60	70
			SURF. EL: 196.47									
			Loose tan fine sandy silt									
			Very stiff tan silty clay									
			Very stiff tan silty clay									
5			Stiff gray silty clay									
			-w/rootlets									
			-tan and gray below 6 ft									
			-tan and light gray below 8.5 ft									
10												
15												
20			-wet at 20 ft									
			-firm at 20 to 21 ft									
25												
30			-gray below 30.5 ft									
			-tan and light gray and firm below 34.5 ft									
35												

Protective Cover

Cement Grout

2-inch diameter stainless steel riser

Bentonite Seal

Filter Sand

Slotted Screen (0.010" Slots)

COMPLETION DEPTH: 35 ft
DATE: 8/14/89

DEPTH TO WATER
IN BORING: 20 ft

DATE: 8/20/89

LOG OF MONITOR WELL NO. 2

Cedar Chemical Company
West Helena, Arkansas

TYPE: Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL (Based on Boring 2)	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT			PLASTIC LIMIT	WATER CONTENT, %	LIQUID LIMIT
						0.2	0.4	0.6			
			SURF. EL: 197.65								
5			Stiff to very stiff tan clayey silt								
10			Stiff brown and tan silty clay								
15			Firm brown clayey silt								
20			Firm to soft gray and brown silty clay to very silty clay w/ferrous stains and rootlets								
			-Gray below 24 ft								
25											
30			Dense tan and gray silty fine sand								
			-w/gray sandy silt seams at 29 to 30 ft								
35											

Protective Cover →

Cement Grout →

2-inch diameter stainless steel riser →

Bentonite Seal →

Slotted Screen (0.010" Slots) →

Filter Sand →

COMPLETION DEPTH: 35 ft
DATE: 8/15/89

DEPTH TO WATER IN BORING: _____
DATE: _____

LOG OF MONITOR WELL NO. 3

Cedar Chemical Company
West Helena, Arkansas

TYPE: Auger to 13.5 ft & Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT			PLASTIC LIMIT	WATER CONTENT, %	LIQUID LIMIT
						0.2	0.4	0.6			
						0.8	1.0	1.2			
SURF. EL: 197.50											
0			Stiff tan silty clay -w/gravel on surface -slight odor								
5											
10											
15			Stiff to firm gray silty clay -w/dark gray stains and odor -tan and gray without odor below 18.5 ft								
20											
25											
30			Loose to medium dense gray sandy silt								
35			-tan and gray silty clay below 34.5 ft								
			Dense dark gray sand								

Protective Cover

Cement Grout

2-inch diameter stainless steel riser

Bentonite Seal

Filter Sand

Slotted Screen (0.010" Slots)

COMPLETION DEPTH: 35 ft
DATE: 8/16/89

DEPTH TO WATER
IN BORING:

DATE:

LOG OF MONITOR WELL NO. 4

Cedar Chemical Company
West Helena, Arkansas

TYPE: Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL (Based on Boring 4) SURF. EL: 196.99	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT			PLASTIC LIMIT +-----+ 10 20 30 40 50 60 70	WATER CONTENT, % -----●----- 40	LIQUID LIMIT +-----+ 10 20 30 40 50 60 70
						0.2	0.4	0.6			
						0.8	1.0	1.2			
5			Stiff tan clayey silt -w/some silty clay pockets								Protective Cover
											Cement Grout
10			Stiff gray silty clay -w/ferrous stains and nodules -tan and gray below 8 ft								2-inch diameter stainless steel riser
15			Stiff tan and gray clayey silt -w/some silty clay pockets and seams								
20			-firm and wet below 18 ft								
25			-gray below 24 ft								Bentonite Seal
30			-more clayey below 32 ft								Filter Sand
35											Slotted Screen (0.010" Slots)

COMPLETION DEPTH: 35 ft
DATE: 8/14/89

DEPTH TO WATER
IN BORING: _____ DATE: _____

LOG OF MONITOR WELL NO. 6

Cedar Chemical Company
West Helena, Arkansas

TYPE: Auger to 2 ft & Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT			PLASTIC LIMIT	WATER CONTENT, %	LIQUID LIMIT
						0.2	0.4	0.6			
SURF. EL: 196.59											
			Stiff brown clayey silt -w/odor								
5			Very stiff gray and tan silty clay -w/ferrous stains								
10			Stiff to firm greenish gray silty clay -w/odor								
15			-tan and gray below 15.5 ft								
20			Firm to stiff tan clayey silt -w/ferrous stains and slight odor								
30			-gray below 25 ft								
40											
50			Loose to medium dense gray fine sandy silt								
60			Dense gray fine to coarse sand								
70			-w/gravel below 65 ft -more gravel below 70 ft	50/6"							
80				40/4"							
				50/5"							

COMPLETION DEPTH: 80 ft
DATE: 8/9/89

DEPTH TO WATER IN BORING: _____
DATE: _____

Protective Cover →

Cement Grout →

2-inch diameter stainless steel riser →

Bentonite Seal →

Filter Sand →

Slotted Screen (0.010" Slots) →

LOG OF MONITOR WELL NO. 6A

Cedar Chemical Company
West Helena, Arkansas

TYPE: Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT						
						0.2	0.4	0.6	0.8	1.0	1.2	1.4
						PLASTIC LIMIT			WATER CONTENT, %			LIQUID LIMIT
						10	20	30	40	50	60	70
			SURF. EL: 196.46									
5			Stiff brown clayey silt -w/odor									Protective Cover
10			Very stiff gray and tan silty clay -w/ferrous stains									Cement Grout
15			Stiff to firm greenish gray silty clay -w/odor -tan and gray below 15.5 ft									2-inch diameter stainless steel riser
20			Firm to stiff tan clayey silt w/ferrous stains and slight odor									
25			-gray below 25 ft									
30												
35												Bentonite Seal
40												Filter Sand
45			Loose to medium dense gray fine sandy silt									Slotted Screen (0.010" Slots)
50												

COMPLETION DEPTH: 50 ft
DATE: 8/9/89DEPTH TO WATER
IN BORING:

DATE:

LOG OF MONITOR WELL NO. 6B

Cedar Chemical Company
West Helena, Arkansas

TYPE: Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT			PLASTIC LIMIT	WATER CONTENT, %	LIQUID LIMIT
						0.2	0.4	0.6			
						0.8	1.0	1.2			
SURF. EL: 196.47											
			Stiff brown clayey silt -w/odor								Protective Cover
											Cement Grout
5			Very stiff gray and tan silty clay -w/ferrous stains								2-inch diameter stainless steel riser
10			Stiff to firm greenish gray silty clay -w/odor								
15			-tan and gray below 15.5 ft								Bentonite Seal
20			Firm to stiff tan clayey silt -w/ferrous stains and slight odor								Filter Sand
25			-gray below 25 ft								Slotted Screen (0.010" Slots)
30											
COMPLETION DEPTH: 30 ft						DEPTH TO WATER IN BORING:			DATE:		
DATE: 8/9/89											

F

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444
FAX: (501) 562-4632

CERTIFIED MAIL

June 26, 1990

Mr. Joe Porter
Cedar Chemical Corporation
P. O. Box 2749
West Helena, AR 72390

CSN: 54-0068
PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

RE: Compliance Evaluation Inspection
ARD990660649

Dear Mr. Porter:

On February 26, 1990, I performed a routine Compliance Evaluation Inspection of your facility pursuant to the Arkansas Hazardous Waste Management Act (Act 406) of 1979, as amended and the Arkansas Hazardous Waste Management Code (Code). The inspection revealed that you are not in compliance with the regulations. The violation(s) discovered are summarized in this letter and documented in the enclosed inspection report:

Purged well water was observed discharging directly onto the ground. Contaminated ground water is considered hazardous waste. Disposal of hazardous waste at an unpermitted site within the State of Arkansas is a violation of Section 4 of the Arkansas Hazardous Waste Management Code (Code). Cedar Chemical Corporation must stop discharging contaminated ground water onto the ground.

You should immediately undertake to correct the violation(s) noted above. You must submit a written report stating what is to be done to contain the purged water, a description of how it will be stored, and how it is to be disposed of within thirty (30) days of receipt of this letter.

The above cited violations are considered unlawful acts according to Section 12 of Act 406 and as such are subject to the penalties of Section 13 of Act 406. Failure to comply may result in the escalation of enforcement actions including the assessment of civil penalties.

If you should have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

David Hartley
David Hartley, Geologist
Hazardous Waste Division

DH/ckh:LTR924

Enclosure

6-4-90

Allen T. Malone

Dick Karkhanian

- Cedar Chemical
- ASPECTE, Derrick, Dick C., Ken, David, Mike, and I
- Recovered containers on-site in a bin now (dinoseb).
- CAP to be accomplished thru RATFA via an order or permit
- Auto LOIS or is NOD needed? **NOD needed!**
on permit application
- Site remains subject to RCRA corrective action since it was ~~is~~ once an interim-status facility.
- Permitting if necessary will require state/EPA joint permit
- CAD now with CAP outline with timeframes.
- Either amend G.W.M. CAD or institute a new CAD (referenced above)
- Need for immediate actions (interim measures) in the Proposed CAD

 1. Identify SWMU's (via "exposure assessments")
 2. Information on releases or potential releases.
 3. Interim measures recommendations (areas that need immediate attention)
 4. Dispute resolution provisions?
- Right of Contribution? NCP? RATFA?
- * Wait for final report on present CAD and issue new CAD.

*Mike/Sammy/Ken
File*

CHARLES W. METCALF 1880-1924
WILLIAM P. METCALF 1872-1840
JOHN W. APPERSON 1906-1985

LAW OFFICES
APPERSON, CRUMP, DUZANE & MAXWELL

#16

CHARLES W. METCALF CRUMP
JEROME S. DUZANE
JOHN W. MAXWELL JR.
ALLEN T. MALONE
ROBERT D. KIMINSKY
ROBERT L. BINKELSPIEL
MICHAEL C. HEWOLEY
JAMES T. WISSELL
JOHN E. RIDER
THOMAS R. BUCKNER
WILLIAM W. OLIVER
WILLIAM R. MASON, JR.
STEVEN N. DOUGLASS
RANDY S. GARDNER

SUITE 210
ONE COMMERCE SQUARE
MEMPHIS, TENNESSEE 38103
901/525-1711

TELECOPY 901/521-0789

EAST OFFICE

SUITE 100
KIRBY CENTRE
1755 KIRBY PARKWAY
MEMPHIS, TENNESSEE 38119
901/756-8300
TELECOPY 901/757-1286

SAMUEL ROBERT STEIN
ATTORNEY

TELECOPIER TRANSMITTAL COVER SHEET

CSN: 5A0068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

DATE: 5-30

TO: Mr. Mike Bates

TELECOPIER NUMBER: (501) 562-4632

NUMBER OF PAGES, INCLUDING THIS SHEET: 3

FROM: Allen T. Malone

IF YOU DO NOT RECEIVE ALL PAGES OR HAVE ANY PROBLEMS
IN RECEIVING MESSAGE, PLEASE CALL (901) 525-1711.

TELECOPY OPERATOR: Janice Warren

03943

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WILLIAM P. METCALF, 1972-1980
JOHN W. APPERSON, 1996-1985

CHARLES METCALF CRUMP
JERRY S. DUZANE
JOHN B. MAXWELL, JR.
WILSON T. MALONE
PHILIP G. KAMINSKY
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THOMAS R. BUCKNER
TONI CAMPBELL PARKER
MELODY W. OLIVER
WILLIAM B. HASON, JR.
STEVEN N. DOUGLASS
RANDY S. GARDNER

SAMUEL RUBENSTEIN
OF COUNSEL

LAW OFFICES
APPERSON, CRUMP, DUZANE & MAXWELL

SUITE 2110
ONE COMMERCE SQUARE
MEMPHIS, TENNESSEE 38103
901/525-1711

TELECOPY 901/521-0769

May 30, 1990

East Office

East Office

West Office

1000 N. PARKWAY

MEMPHIS, TENNESSEE 38102

901/525-1711

TELECOPY 901/521-0769

Mr. Mike Bates, Manager
Hazardous Waste Division
Department of Pollution Control & Ecology
8001 National Drive
Little Rock, Arkansas 72209

FAX (501) 562-4632

Re: Cedar Chemical Corporation
West Helena, Arkansas

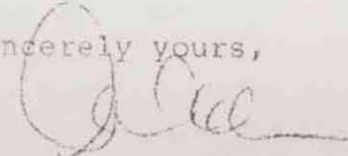
Dear Mr. Bates:

Joe Porter, the Environmental Engineer at Cedar's West Helena Plant, Dick Karkkainen with Woodward-Clyde Consultants, and I would like to meet with you and other members of your staff to discuss the following topics:

1. Status of implementation of the revised "Site Characterization and Drum Disposal Area Delineation Work Plan" which was forwarded to you yesterday by Woodward-Clyde, including revisions to the plan.
2. Timing of implementation of the Removal Action Work Plan which was sent to you in draft form last month.
3. Proposed timing and scope of plant wide facility investigation/corrective measures study.

Cedar has arranged for financing for construction of the DCA Project which will be constructed in the area covered by Woodward-Clyde's work plan, plus an office building and additional facilities to be constructed on the West Helena site. The closing is scheduled in the near future, but a better understanding of each of the three topics will be required by the banks before they are willing to close the loan. I will participate in a conference call with the banks on June 7, 1990. Accordingly, it is important that we meet sometime prior to then, the earlier the better. Any time between June 1 and June 6, would be acceptable.

Sincerely yours,



Allen T. Malone

ATM:jw

APPERSON, CRUMP, DUZANE & MAXWELL

Mr. Mike Bates

May 30, 1990

Page Two

cc: Mr. Joe Porter

Mr. Richard D. Karkkainen

RCRA INSPECTION

SITE IDENTIFICATION

E.P.A. ID #

Date

ARD 990660649

2-16-90

Site Name

Street (or other identifier)

Cedar Chemical Corporation

P.O. Box 2749

City

State

Zip Code

County Name

West Helena

AR

72390

Phillips

Site Operator Information

Name

Telephone Number

Same

(501) 572-3701

Street

City

State

Zip Code

Chemical manufacturing of pesticides

Site Description

Type of Ownership

☐ Federal ☐ State ☐ County ☐ Municipal ☒ Private

☒ Generator ☐ Transporter ☐ Treatment ☐ Storage ☐ Disposal

☐ Non-generator ☐ Small-generator ☐ Exempted

INSPECTION INFORMATION

Principal Inspector Information

Name

Title

David Hartley

Hazardous Waste Inspector

Organization

Telephone No. (area code & No.)

ADPC+E

(501) 562-7444

Inspection Participants

Marc Simpson

ADPC+E

Joe Porter

Env. Eng. Cedar Chem.

OFFICIAL PHOTOGRAPH

U.S. ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Open Drums of Propanil
 LOCATION: Cedar Chemical - near old spec
product storage area
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 2-16-90 TIME: 13:05
 WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]
 PHOTOGRAPHER (Sig.): David Hattley
 WITNESS: Joe Porter
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 200 T: 1/ f:
 NEGATIVE LOCATION: ADPC1E FILE #: HU
 PROCESSED BY: Wal Mart
 PHOTO #: 1 of 7

Cedar Chemical
ARD 990660649
2-16-90



OFFICIAL PHOTOGRAPH

U.S. ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Yellow stained soil
 LOCATION: Cedar Chemical - near home
yard
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 2-16-90 TIME: 13:30
 WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]
 PHOTOGRAPHER (Sig.): David Hattley
 WITNESS: Joe Porter
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 200 T: 1/ f:
 NEGATIVE LOCATION: ADPC1E FILE #: HU
 PROCESSED BY: Wal Mart
 PHOTO #: 2 of 7



OFFICIAL PHOTOGRAPH

U.S. ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Yellow Stained Soil
 LOCATION: Cedar Chemical - Bone yard
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 2-16-90 TIME: 13:30
 WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]
 PHOTOGRAPHER (Sig.): David Hattley
 WITNESS: Joe Porter
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 200 T: 1/ f:
 NEGATIVE LOCATION: ADPC1E FILE #: HU
 PROCESSED BY: Wal Mart
 PHOTO #: 3 of 7



OFFICIAL PHOTOGRAPH

U.S. ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Off-Spec Product Containers
 LOCATION: Cedar Chemical - Product / Off-Spec
Product Storage Area
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 2-16-90 TIME: _____
 WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]
 PHOTOGRAPHER (Sig.) Dawn Haulley
 WITNESS: Joe Porter
 CAMERA: Pentax K1000
 FILM TYPE: 35mm ASA: 200 T: 1/____ f: _____
 NEGATIVE LOCATION: ADPCIE FILE #: HW
 PROCESSED BY: Wal Mart
 PHOTO #: 4 of 7

Cedar Chemical
 ARD 990660649
 2-16-90



OFFICIAL PHOTOGRAPH

U.S. ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Off-Spec Product Containers
 LOCATION: Cedar Chemical - Product / Off-Spec
Product Storage Area
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 2-16-90 TIME: _____
 WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]
 PHOTOGRAPHER (Sig.) Dawn Haulley
 WITNESS: Joe Porter
 CAMERA: Pentax K1000
 FILM TYPE: 35mm ASA: 200 T: 1/____ f: _____
 NEGATIVE LOCATION: ADPCIE FILE #: HW
 PROCESSED BY: Wal Mart
 PHOTO #: 5 of 7



OFFICIAL PHOTOGRAPH

U.S. ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Off-Spec Product Containers
 LOCATION: Cedar Chemical - Product / Off-Spec
Spec Product Storage Area
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 2-16-90 TIME: _____
 WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]
 PHOTOGRAPHER (Sig.) Dawn Haulley
 WITNESS: Joe Porter
 CAMERA: Pentax K1000
 FILM TYPE: 35mm ASA: 200 T: 1/____ f: _____
 NEGATIVE LOCATION: ADPCIE FILE #: HW
 PROCESSED BY: Wal Mart
 PHOTO #: 6 of 7



p. 7 of 110
Cedar Chemical
ARD990660649
7-16-90

OFFICIAL PHOTOGRAPH
U.S. ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Discharge of purged well water
LOCATION: Cedar Chemical
Monitor Wells - 6, 6A, 6B, 6C
CITY: W. Helena COUNTY: Phillips STATE: AR
DATE: 2-16-90 TIME: 13:20
WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]
PHOTOGRAPHER (Sig.) David J. Hartley
WITNESS: Mark Simpson
CAMERA: Pentax K-1000
FILM TYPE: 35 mm ASA: 200 T: 1/ f:
NEGATIVE LOCATION: ADPCTE FILE #: HW
PROCESSED BY: Wal Mart
PHOTO #: 7 of 7



Cedar Chemical Corp.
ARD990660649
February 16, 1990

1. Vertac Chemical Corporation was dismissed as a party of the action in paragraph 1.
2. Cedar ceased discharging any hazardous wastes into the surface impoundments as required in paragraph 2.
3. Cedar made hazardous waste determinations and maintains documentation of the determinations with test results as required in paragraph 3.
4. Cedar maintains an approved inspection plan. The plan was conditionally approved by the October 22, 1987, letter attached completing paragraph 4 requirements.
5. Cedar submitted a narrative description of processes, chemical and physical composition of process wastes generated in the September 15, 1987, letter as required in paragraph 5 of the order.
6. Cedar submitted a final closure plan for the hazardous waste storage facilities in their September 14, 1987, letter which was approved and final closure was approved by the December 12, 1988, letter attached. Requirements of paragraphs 6 and 7 were acknowledged by this letter.
7. Cedar submitted results of analysis on sludges, sediments and liquids in the surface impoundments on April 27, 1988, for review and paragraph 8 of the CAO was deemed satisfied by the attached June 13, 1988, letter. This letter had a typographical error that stated paragraph 9 (hydrogeologic investigation) was completed but should have stated paragraph 8 (surface impoundment investigation) was completed.
8. Cedar submitted a hydro-geologic investigation plan on January 25, 1988, and modifications in a letter dated January 4, 1988. The modified hydrogeologic investigation plan was conditionally approved on March 14, 1988, letter attached. This approved submittal satisfies paragraph 9(a) and 9(b) of the CAO.
9. Cedar submitted results of the hydrogeologic investigation plan in a hydrogeologic study on July 27, 1988, as required in paragraph 9(c) of the Order.
10. Cedar submitted the groundwater monitoring program on September 28, 1988, and was advised to proceed with the implementation of the groundwater monitoring program by attached letter dated December 2, 1988. Comments from ADPC&E staff on the hydrogeologic assessment and the groundwater monitoring program were made in this letter. A June 28, 1989, letter conditionally approved the groundwater monitoring program pursuant to paragraph 10 (c) of the order.

Cedar Chemical Corp.
ARD990660649
February 16, 1990

11. Cedar has completed 3 rounds of sampling and is to do the last sampling in April, 1990. A final report on the findings is due shortly after the April sampling event to comply with paragraph 10(c) of the Order.
12. Cedar submitted payment for civil penalties outlined in paragraph 11 of the CAO in their August 14, 1987, letter.

Cedar Chemical Corporation is currently in compliance with the CAO. Contaminants have been detected in groundwater samples. Additional work is expected since contamination has been detected. The final report should address this.

At the time of the inspection, monitoring wells were being sampled. All purged water was discharged onto the ground. Laboratory analysis confirmed the water to be contaminated on the day of the inspection. This is considered illegal disposal of hazardous waste. See violation listed below.

Areas of Concern

1. Groundwater contamination.
2. Closed surface impoundments.
3. Buried drums including those in the warehouse foundation.
4. Visibly stained (yellow) soils.
5. Storage conditions of off-spec products.

Violation

Disposal of hazardous waste at an unpermitted site within the State of Arkansas is a violation of Section 4 of the Arkansas Hazardous Waste Management Code.

04-06-90 11:16 AM FROM CEDAR CHEMICAL CORP

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Cedar Chemical
ARD 990660649
3-16-90

P02/03

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P. O. BOX 2749
WEST HELENA, AR 72390
(501) 572-3701

April 6, 1990

Mike Bates
Arkansas Department of Pollution Control & Ecology
8001 National Drive
P.O. Box 9583
Little Rock, AR 72209

Re: Excavation

Dear Mike:

To follow up on our phone conversation, we have uncovered what we believe to be a small drum burial area. We were digging a trench as part of a construction project on our stormwater drainage system. At approximately 6 feet below grade a drum was uncovered. Continued digging of the area uncovered approximately eight drums in a six foot long, four foot wide trench down to a depth of twelve feet below grade. An area map is attached.

Approximately 250 cubic feet of contaminated soil has been removed. We have ordered a hazardous waste bin from Rollins ChemPak, Inc. for containment of the excavated material. It is currently covered with plastic sheets and does not pose a threat from rainwater run off. The excavated area was filled with fresh dirt and construction continued. There is no analytical data as of now. The material appears to be emulsifier and dinitro compounds.

We will have the firm of Woodward-Clyde involved in additional investigation. We would like to have your assistance and guidance in cleaning up this area.

Sincerely,

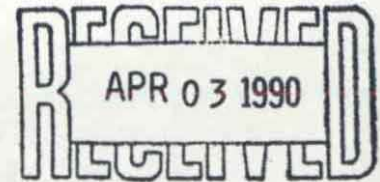


Joe E. Porter
Environmental Engineer

cc: J.H. Miles
T.J. Lodice
J.R. Tomblin

Cedar Chemical
ARD 990660649
2-16-90

David p. 9 of 110



CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P. O. BOX 2749
WEST HELENA, AR 72390
(501) 572-3701

March 28, 1990

David Hartley
Arkansas Department of Pollution Control & Ecology
8001 National Drive - P.O. Box 9583
Little Rock, Ar. 72209

Re: Verbal Information Request

Dear Sir:

On March 20 I inventoried our drum area you requested and found the following:

- 1- Propanil (labeled AgroDavid) - 126 drums
- 2- Permethrin/Cypermethrin raw materials and product - 82 drums

Item 1 is currently being reworked into another formulation. Item 2 material will either be used by us or forwarded to the ICI plant in Alabama. An exact disposition is to be made this week.

The warehouse foundation is a concrete vault containing off-spec Propanil, off-spec propanil intermediates, and a number of unknowns from a previous owner. The building was constructed in 1975 without an adequate inventory of the contents.

Sincerely,

Joe E. Porter
Environmental Engineer

cc: J.H. Miles
T.J. Lodice

Faint background text: Capital One Bond 25% COTTON CONTENT

Permethrin - cyclopropanecarboxylic acid

Cypermethrin "

Propanil - propionanilide, 3',4' Dichloro

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444

p. 10 of 110
cedar chemical
ARD 990660649
2-16-90

CERTIFIED MAIL

June 28, 1989

Mr. Joe Porter
Environmental Engineer
Cedar Chemical Corporation
P.O. Box 2749
West Helena, Arkansas 72390

Dear Mr. Porter:

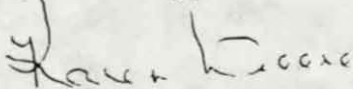
The Department has completed review of your submissions concerning piezometric data and proposed monitoring well locations pursuant to paragraph 10(a) of the Order. The groundwater monitoring program is hereby approved based on the following conditions:

1. The proposed shallow monitoring well for the perched water at boring 6-A should be drilled to a depth of 15 feet with the bottom 5 feet being screened due to the depth to water being below 10 feet for the majority of the year.
2. Screen intervals in wells MW-1, MW-2 and MW-3 should be set at 35 to 25 feet below the surface so that the silty clay material above the sand may be screened.
3. Monitoring wells should be installed in the area around piezometers B-3 and B-3A as groundwater flows in this direction for a significant time during a calendar year. The apparent perched water in the area of B-3 needs to be investigated.
4. Odors were noted during the drilling of several borings. To assist in contaminant identification, an organic vapor detector should be used while drilling to at least a depth of 25 feet below the surface.

Receipt of this letter shall serve to initiate implementation of the groundwater monitoring plan in accordance with paragraph 10(c) of the Order.

If you have any questions in the above matter, please feel free to contact me.

Sincerely,



Karen Deere
Manager, Enforcement Branch
Hazardous Waste Division

KD/alb:LTR76

cc: Mark Simpson

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

PHONE: (501) 562-7444

p. 12 of 110
Cedar Chemical
ARD 990660649
2-16-90

December 12, 1988

Mr. Joe Porter
Environmental Engineer
Cedar Chemical Corp.
P. O. Box 2749
West Helena, AR 72390

RE: Cedar Chemical Corp.
Final Closure
Tank and Container Storage

Dear Mr. Porter:

The Department has received correspondence dated November 21, 1988, containing the independent certification required for clean closure in respect to the container storage area and storage tanks, T-B112.

The Department hereby approves the final certification for the container storage area and storage tank T-B112. With this approval, all hazardous waste management units are closed at this facility, resulting in a final closure. The requirements of CAO paragraph 7 are also satisfied.

Cedar Chemical Corp. will be required to comply with 40 CFR 262.34 as per accumulation times of hazardous waste with the container storage area.

Sincerely,

Randall Mathis

Randall Mathis
Acting Director

DW/ckh:LTR309

cc: Mike Bates, Chief, Hazardous Waste Division
Gary Martin, Manager, Technical Branch, HWD
✓ Karen Deere, Manager, Enforcement Branch, HWD
Derick Warrick, Engineer, Technical Branch, HWD

MS p. 13 of 110
Cedar Chemical
ARD 990660649
2-16-90

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

PHONE: (501) 562-7444

December 2, 1988

Mr. Joe Porter
Environmental Engineer
Cedar Chemical Corporation
P.O. Box 2749
West Helena, Arkansas 72390

Dear Joe:

RE: Consent Administrative Order LIS 86-027

Department staff have completed review of the hydrogeologic assessment report which was submitted on August 4, 1988, and the groundwater monitoring program which was submitted on September 28, 1988.

Comments on the hydrogeologic assessment report are as follows:

- The structure map on Plate 18 is constructed by using only two data points. This may not be an adequate amount of well control to complete this map. A data point near the middle of the site or additional data from USGS that reinforces this structural map should be provided to the Department.
- The map presented for recommending the monitoring well locations needs to show the approximate location of the three (3) closed and capped lagoons. This must be completed before the proper placement of wells can be determined. The area which Borings 6 and 6A were drilled is an appropriate location for the use of a two-well monitoring cluster locating the screens so as to monitor the perched zone and the uppermost sand interval. Screen depths should also be proposed for each monitoring well location.

Comments on the groundwater monitoring program are as follows:

- The Department concurs with the gathering of water elevation measurements from the present to the end of March 1989 as providing enough data for evaluation of seasonal fluctuations in order to properly locate monitoring wells. It is recommended that the piezometers be measured for water levels at least twice a month with potentiometric surface maps being constructed for each measuring event. Also, the perched water observed in piezometer 6A should be monitored.

- Monitoring well locations should be reevaluated and proposed after all water elevation data has been interpreted.
- The recommended well depths of ten feet below minimum seasonal groundwater elevation are acceptable. The location of MW-4 would be an optimum location for a monitoring station screened at a shallow and medium depth if the potentiometric surface remains basically the same as the map in the submittal monitoring well plan. The location for upgradient well M-1 appears to be appropriate.
- The use of stainless steel for construction of well casings and screens is appropriate for all wells. The ground level and top of casing must be surveyed after installation of each well.

If you have any questions about any of the above comments, please feel free to call Mark Simpson or myself. Otherwise, Cedar should proceed with implementation of the groundwater monitoring program.

Sincerely,



Karen Deere
Enforcement Branch Manager
Hazardous Waste Division

KD:fw:1498

cc: Mark Simpson, ADPC&E

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO : Sammy Bates, Inspector, Hazardous Waste Div.
FROM : Jay Justice, Hazardous Waste Chemist, T.S. JJ
DATE : 27-OCT-1988
SUBJECT : Results from analyses on soil samples taken at Cedar Chemical on August 22, 1988

Six of the seven soil samples taken at Cedar Chemical Company on August 22, 1988, were extracted with an organic solvent and presented to the GC/MS to determine if any semi-volatile organic compounds were present in them. Two of the samples demonstrated that they had some semi-volatile organic compounds present in them. The organic compounds present and their estimated concentrations in the soil are listed below. All concentrations are expressed in mg/kg and reflect the amounts that are expected to be present in the samples if they are completely devoid of moisture. The soil sample that was not analyzed was labeled, "Corner of Hwy 242 and Industrial Park Road".

Southeast corner of storage pad

2,5-Cyclohexadiene-1,4 dione, 2,6-Bis(1,1-Dimethylethyl)	2
Bis (Dimethylethyl) Benzenediol	2
2-Dibenzofuranamine	7
4-Dibenzofuranamine	5

North side of tank TB112

Dichloronitro Benzene	1
Bis(Dimethyl ethyl) Benzenediol	5
1,1'-(2,2-Dichloroethylidene) Bis (4-methoxy) Benzene	95
Diphenyl Sulfone	3000

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Cedar Chemical
ARD 990660649
3/16/90



STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

PHONE: (501) 562-7444

June 13, 1988

Mr. Joe Porter
Environmental Engineer
Cedar Chemical Corporation
P.O. Box 2749
West Helena, AR 72390

Dear Joe:

The Department has completed evaluation of the results of analysis on the sludges, sediments and liquids in the surface impoundments which were submitted by you on April 27, 1988.

As the results of the analysis indicate that no hazardous constituents were detected at significant levels, the requirements of paragraph 9 of the CAO are hereby deemed satisfied.
should be paragraph 8 - surface impoundment investigation DH 2-16-90

If you have any questions in this matter, please feel free to call.

Sincerely,

A handwritten signature in cursive script that reads "Karen Deere".

Karen Deere
Enforcement Branch Manager
Hazardous Waste Division

KD:fw:1252

cc: Legal, ADPC&E



STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

p. 17 of 110
Cedar Chemical
ARD990660649
2-16-90

PHONE: (501) 562-7444

March 14, 1988

Mr. Joe Porter
Environmental Engineer
Cedar Chemical Corporation
P. O. Box 2749
West Helena, Arkansas 72390

RE: Consent Administrative Order

Dear Joe:

We have reviewed your modified hydro-geologic investigation plan dated January 25, 1988 in conjunction with your letter dated January 4, 1988. The Department is hereby approving the investigation pursuant to the following conditions:

1. Submission of an implementation schedule for the investigation within fifteen (15) days of receipt of this letter.
2. An explanation of plant north versus true north should be shown on all site drawings submitted.
3. All the work outlined in the January 4 letter is completed and documented in the final report.
4. Regional information is provided to document the conclusion that the bottom of the upper most aquifer is not deeper than 100 feet below the surface.

If you have any questions in this matter please feel free to call.

Sincerely,

Karen Deere
Manager, Enforcement Branch
Hazardous Waste Division

KD/ckh:LTR3

cc: Legal file
/Jim Rigg

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P. O. BOX 2749
WEST HELENA, AR 72390
(501) 572-3701

Jan 4, 1988

Karen Deere
Arkansas Department of Pollution Control & Ecology
8001 National Drive - P.O. Box 9583
Little Rock, Arkansas 72209

Re: Hydrogeologic Assessment Plan

Dear Karen,

We have reviewed your comments of December 2, 1987 and also discussed technical aspects with Charles Johnson. The following items have been addressed. We have asked our consulting firm, Geologic Associates, Inc., to rewrite their proposal to classify certain items.

Per your letter:

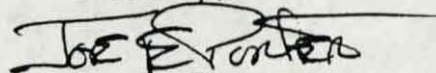
- we have asked Geologic Associates to review published material concerning the regional geology and hydrogeology of the area.
- the hydrogeologic assessment report will include:
 - (a) narrative description of geology
 - (b) geologic cross sections
 - (c) geologic maps
 - (d) boring logs
 - (e) raw data and interpretation
 - (f) narrative description of groundwater with flow patterns
 - (g) potentiometric maps with flow lines
 - (h) raw data and analysis of slug or pump tests (we prefer pump test)
 - (i) well construction logs
- we will locate one addition well cluster in the area bounded by Hwy 242, the industrial park road, and the active plant area.
- borings will be advanced to delineate a bottom confining layer.
- At least one boring will be placed in an area of the DNBP contamination. Precautions will be taken to prevent cross-contamination between the well and surface soil.
- The soil sampling system is defined on page 2 as a CME continuous sampling system utilizing a nominal 2.5 inch inside diameter, split barrel sampler. More details will be provided.

- As shown on site drawings, plant north is approximately 15 degrees east of true north. Plant north is an arbitrary designation being convenient because it is perpendicular to the Union-Pacific Railroad tracks. Both designations will be shown on all drawings and noted in narratives.

We agree with the comments about additional borings and/or piezometers. The project is to determine groundwater flow and direction. We will take the steps necessary to demonstrate this. We also agree with your comments concerning PVC versus stainless. We believe PVC will be quite acceptable as piezometers and some initial well sampling. However, for the long term we do intend to use stainless steel for monitoring well construction.

We anticipate this answers any questions concerning the hydrogeologic assessment plan. We are asking Geologic Associates to formalize their plan and should have it in the next two weeks.

Sincerely,



Joe E. Porter
Environmental Engineer

cc: J.H. Miles
G.L. Pratt
A.T. Malone
Charles Johnson, ADPC & E



STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

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Scanned
Cedar Chemical
ARD 990660649
2-16-90

PHONE: (501) 562-7444

Certified P-490 584 033

October 22, 1987

Mr. Joe Porter
Environmental Engineer
Cedar Chemical Corporation
P.O. Box 2749
West Helena, AR 72390

RE: Consent Administrative Order

Dear Joe:

The Department has received and reviewed your submission of September 21, 1987 concerning amendments to the original inspection plan. The resubmission is hereby approved with the following condition:

The Reporting of Accidents, Repairs, and Remedial Action log should be attached to the inspection log originating the response.

Paragraph 4 of the Order has been conditionally satisfied.

The submission dated September 15, 1987 pursuant to paragraph 5 of the Order has also been reviewed.

The sampling and analysis plan contains many references to the use of appropriate containers, preservatives, etc. The plan should detail the step-by-step sampling and analysis procedures, including but not limited to preservatives, chain of custody sheets, field sampling logs, containers used, analytical methods, detection limits, QA-QC for both sampling and analysis. In lieu of revising the plan, all the necessary information may be submitted in the resulting report. However, if the report includes or fails to include actions taken which place the validity of the samples or analytical data in question, resampling may be required. Please let me know what your preference is in this matter.

Also, the plan does not include further testing if any of the samples are determined to meet hazardous waste criteria. The extent of contamination would have to be defined.

The closure plan submitted on September 14, 1985 and the justification for removal of two tanks from the Part A are currently under review.

Therefore, please respond to the deficiencies in the sampling and analysis plan for the surface impoundments within thirty (30) days of the date of receipt of this letter.

If you have any questions, please feel free to call.

Sincerely,



Karen Deere, Manager, Enforcement Branch
Hazardous Waste Division

KD:fw

cc: Sammy Bates, Inspector, Haz. Waste Div.
Legal file

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REC'D AUG 17 1987

p. 27 of 110
Cedar Chemical
ARD 490660649
2-16-90

August 14, 1987 ✓

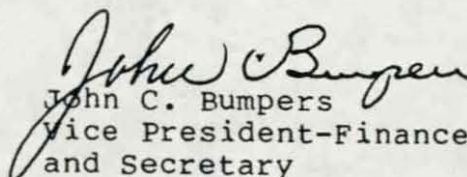
Ms. Karen Deere
Arkansas Department of Pollution
Control and Ecology
8001 National Drive
P.O. Box 9583
Little Rock, Arkansas 72209

Dear Ms. Deere:

RE: LIS 86-127

Enclosed is Cedar Chemical Corporation's check No. 01917 in the amount of \$15,000 which represents the penalty outlined in paragraph 11 of the Consent Administrative Order LIS-86-027.

Sincerely,


John C. Bumpers
Vice President-Finance/Admin.
and Secretary

JCB:nm
enclosure

cc: Allen T. Malone, Esquire
Mr. Geoffrey L. Pratt



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

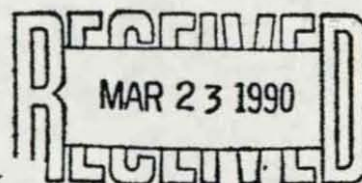
REGION 6

1445 ROSS AVENUE, SUITE 1200

DALLAS, TEXAS 75202-2733

Doice / David
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Doice - Pls contact
Canellas - explain that,
prior to any additional
field work, they need to
update their info. -
more GW info has been
developed under cond. of
an Order from this
Agency (coordinate
w/ David H.)
Thanks
MD

Mr. Doice Hughes
Arkansas Department of Pollution
Control and Ecology
P.O. Box 9583
Little Rock, Arkansas 72209

RE: Cedar Chemical/Vertax
(ARD990660649)

Dear Mr. Hughes:

Enclosed is a copy of the Sampling Inspection Report, dated July 29, 1986,
prepared by Ecology and Environment, Inc. for the U.S. EPA.

If you need any additional information, please contact me at (214) 655-6740.

Sincerely yours,

B. J. Canellas

Bart Canellas
Environmental Engineer

cc: Glenda Gross (6H-SA)

ECOLOGY AND ENVIRONMENT, INC.,

REGION VI

MEMORANDUM

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cedar chemical
ARD 990660649
2-16-90

TO: Keith Bradley, Region VI RPO

FROM: Miles Bolton, Ground Water Hydrologist *MWB*

THRU: K. H. Malone, Jr., Region VI RPM *KHM*

DATE: July 29, 1986

SUBJ: Sampling Mission Results from the Vertac-West Helena Site,
West Helena, AR (AR 361)
TDD# R06-8507-13

INTRODUCTION

FIT was tasked by the USEPA to conduct a sampling mission at the Vertac-West Helena site, West Helena, Arkansas, Figure 1. It was specifically requested that both surface and subsurface soil samples be collected at three inactive surface impoundments located along Vertac's northwestern boundary. It was agreed that three sample stations would be established for each impoundment area.

SITE DESCRIPTION AND HISTORY

On October 19, 1985, FIT members Miles Bolton, Weldon Day and Jeff Dubose met with site representative Joe Porter to discuss the following day's sampling mission and obtain additional site information. A summary of the site history follows:

A man named Kencade started operations at this site around 1970 manufacturing methoxychlor. At that time, ponds were present where the inactive surface impoundments are now located. In 1972 the chemical plant was sold to Jerry Williams who sold the plant to ANSEL later in 1972. In 1973 the plant was again purchased by Jerry Williams. By 1973 the plant was known as Eagle River Chemical. The name was later changed to Vertac, Inc. The predominant chemicals manufactured in the past were dinitro herbicide and propanil. The major chemicals currently being manufactured are methymil, permethrin, sypermethrin, and a hydrocarbon polymer that is composed of kerosine and I sonax 132. Mr. Porter claims that the yellow blocks scattered throughout the inactive portion of the site are where ANSEL buried dinitro drums.

The surface impoundments were created from the ponds around 1972-73. Limestone was added to the narrow impoundment for the acid neutralization of

Reviewed by G.M.W.-SB
Date: 9/5/86

dichloromaline and propionic acid. The other two ponds were used as waste disposal. Wash water from Helena Chemical's (AR 1589) chemical formulation operations was also placed into the ponds. Helena Chemical stopped disposing of their wastes in the ponds around 1976-77.

The ponds were closed in 1978. The closure procedure consisted of pumping the water from the pond (the water was removed by Rollins) and then placing a clay cap consisting of native soil and bentonite over the impoundments. An aerial photograph owned by Vertac indicates the narrow pond was approximately 2-4 feet deep and the other two ponds were approximately 5 to 10 feet deep.

SAMPLING RESULTS

Nine surface and nine subsurface samples were collected by FIT members Miles Bolton, Weldon Day, Jeff Dubose, Thomas Lensing and Lloyd Collins on October 20, 1985. Their locations are shown in Figure 3. The subsurface samples were collected using post hole diggers. Since the maximum depth obtainable with post hole diggers is about 5 feet, the samples were collected along the sides of the ponds to ensure penetrating the fill material used to cover the ponds. In all cases, the subsurface soil samples were collected after a lithologic change in the soil profile was evident, indicating the subsurface samples consisted of non-fill material.

Organic and inorganic laboratory results, field sample documents and photographs are attached to this report. The sample stations were lettered A through I. The number 1 was added as a suffix to each letter to indicate surface samples and the number 2 was added to indicate subsurface samples. Note in the laboratory results that organic samples from Stations D1, G-2, H1 and I2 had to be analyzed as medium concentration samples by the laboratory. Table 1 summarizes the organic surface sample results and Table 2 summarizes the organic subsurface sample results. These tables do not list any compounds that were flagged as being present in laboratory blanks, tentatively identified, or below detection limits. Therefore, only those compounds positively identified as being present in the samples are listed.

The organic sample results indicate that the surface fill material for pond #1 is more contaminated than the subsurface material, especially at Station B. The opposite is true for ponds 2 and 3. Only pesticides were positively identified in the subsurface samples.

In contrast to the organic results, the inorganic sample results do not indicate the presence of significant inorganic contamination. The lack of a background sample, however, makes it difficult to draw definite conclusions.

CONCLUSIONS AND RECOMMENDATIONS

It is evident from the sample results that the subsurface material is contaminated with pesticides and other organic compounds and the surface fill material is contaminated with pesticides. Since the surface fill material is contaminated with a variety of pesticides, the possibility that the contamination extends beyond the site boundaries should be considered.

Considering the area's dependence upon ground water, the FIT recommends that monitoring wells be installed around the ponds to determine if the ground water has been affected by the organic compounds. The proposed well locations are shown in Figure 4. These locations would provide water quality and local hydraulic gradient information. Currently, FIT lacks local hydrogeologic information for the area around the site. Therefore, the specific design of the wells will be dependent upon the acquisition of additional hydrogeologic information.

If the EPA desires to determine whether or not the surface soil contamination extends beyond the fill material as a result of wind blown action or possible indiscriminate dumping, then the FIT recommends that surface soil samples be collected outside of the pond area. The proposed locations are shown in the attached aerial photograph, Figure 5. Each sample would be a composite consisting of soil collected at the station and four other locations no more than 10 feet from the station. Based upon these results, a comprehensive sampling plan could be developed to accurately determine the extent of surface pesticide contamination.

Table 1. Organic surface soil results from the Vertac-West Helena site (AR 361). Only results that were not flagged are shown. Concentrations are in parts per billion.

Station	A1	B1	C1	D1	E1	F1	G1	H1	I1
4,4'-DDT		1,813	26		30	34	25		
Methoxychlor	3,984	12,996	241			184	817	221	444
Aldrin		596.1						37	
Dieldrin		1,120							
Chlordane		3,563							
4,4'-DDE		421							

Table 2. Organic surface soil results from the Vertac-West Helena site (AR 361). Only results that were not flagged are shown. Concentrations are in parts per billion.

[illegible]

QA/QC

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After reviewing the data obtained from samples taken at the Vertac-West Helena facility the results are as follows:

In the inorganic analysis the spike recoveries for antimony (55%), lead (65%), selenium (0%), silver (60%), tin (17%), manganese (34%) and arsenic (70%) were below QC limits. Any values reported for these metals may be biased to the low side, and actual values may be higher than reported values.

The duplicate analysis for calcium should be used cautiously. All other analysis for inorganics were satisfactory.

For the organic analysis the surrogate recoveries for samples FC284, FC285, FC286 and FC287 were outside of QC limits. These four samples were reextracted and reanalyzed, however the reanalysis was worse than the original analysis so the results from the original analysis was reported. Since the surrogates were out of QC limits both times, this may represent a real matrix interference in the samples and not a lab problem.

For sample FC291 the % RPD for the volatiles were all outside QC limits. Since this was a field rinsate blank the effect was probably minimal.

For sample FC280 the % surrogate recoveries for all fractions were slightly above QC limits. Values reported for this sample may be higher than actual values.

All compounds found in the lab blank were flagged with a B.

The tuning and calibration analysis for these samples were satisfactory.

The analysis of these samples show that each location had a variety of pesticides at varying concentrations.

INORGANIC SOIL ANALYSIS SUMMARY

Page 1 of 3

CASE NUMBER: 4781

SITE NAME/CODE: Vertac, W. Helena AR 361

PARAMETER	CONCENTRATIONS (ppm) EPA Sample Numbers											AMBIENT BACKGROUND 1.	
	MFB341	MFB350	MFB342	MFB351	MBF343	MFB354	MFB344	MFB355	MFB345	MFB356	MFB346	Western U.S. 2.	Eastern U.S. 2.
Matrix type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	Soil	Soil
Aluminum	3570	3690	3710	2760	3320	3240	2870	2750	5330	6920	3000	58,000	33,000
Antimony								28R				.47	.52
Arsenic	11R	6.3R	16R	4R	6.9R	7.8R	20R	2.2R	7.2R	9.9R	4.6R	5.5	4.8
Barium	111	84	144	110	90	87	109	68	118	122	88	580	290
Beryllium												0.68	0.55
Cadmium												1	1
Calcium	13,100*	6650*	4700*	21,500*	15,200*	23,900*	16,100*	217,000*	8610*	1470*	11,900*	18,000	3,200
Chromium			5.2					5.4				41	33
Cobalt												7.1	5.9
Copper	12	8	6.1	7.5	8.2	7.6	7	4.3	6.9	9.9	6.2	21	13
Iron	10,500	10,400	8160	9530	9880	10,400	9250	5330	11,400	12,200	8670	21,000	14,000
Lead	7.8R	7.3R	9.4R	5.9R	7.4R	6.8R	6.3R	3.3R	7.7R	8.5R	7.2R	17	14
Magnesium	6850	3950	2390	11,700	8550	12,500	8850	12,300	5190	1360	6760	7,800	2,300
Manganese	627R	444R	640R	500R	636R	579R	661R	459R	582R	515R	519R	380	260
Mercury	0.081	0.038	0.095	0.067	0.079	0.050	0.057	0.019	0.048	0.083	0.067	0.046	0.081
Nickel												15	11
Potassium	483		490	2.91					828	788	379		
Selenium												.23	.30
Silver												-	-
Sodium	542	485	469	712	388	502	566	734	650	822	465	10,000	2,600
Thallium												9.1	7.7
Zinc												.90	.96
Vanadium												70	43
Cyanide	40	32	27	32	38	37	34	31	36	34	33	55	40
Station No.	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	F1		
Sample Location	INACTIVE IMPOUNDMENT, NORTH POND	INACTIVE IMPOUNDMENT, NORTH POND (SUB-SURFACE)	INACTIVE IMPOUNDMENT, NORTH POND	INACTIVE IMPOUNDMENT, NORTH POND (SUB-SURFACE)	INACTIVE IMPOUNDMENT, NORTH POND	INACTIVE IMPOUNDMENT, NORTH POND (SUB-SURFACE)	INACTIVE IMPOUNDMENT, SOUTH POND	INACTIVE IMPOUNDMENT, SOUTH POND (SUB-SURFACE)	INACTIVE IMPOUNDMENT, SOUTH POND	INACTIVE IMPOUNDMENT, SOUTH POND (SUB-SURFACE)	INACTIVE IMPOUNDMENT, SOUTH POND		

-Indicates a value estimated or not reported due to the presence of interference.
 -spike sample recovery is not within control limits.
 -duplicate analysis is not within control limits.

1. Values obtained from "Element Concentrations Soils and Other Surface Materials of the Conterminous United States", dated 1984. U.S.G.S. Professional Paper 1270.
 2. Reference for East/West Division is the 96 W longitudinal line which bisects Region VI.
 10/31/85

INORGANIC SOIL ANALYSIS SUMMARY

CASE NUMBER: 4781

SITE NAME/CODE: Vertac, W. Helena AR 361

PARAMETER	CONCENTRATIONS (ppm)								AMBIENT BACKGROUND 1.	
	EPA Sample Numbers								Western U.S. 2.	Eastern U.S. 2.
	MFB357	MFB347	MFB358	MFB348	MFB359	MFB349	MFB360		Soil	Soil
Matrix type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Aluminum	4240	4020	3780	2830	4180	3640	2910		58,000	33,000
Antimony									.47	.52
Arsenic	6.6R	6.0R	58R	4.9R	7.6R	5.9R	32R		5.5	4.8
Barium	103	110	117	116	79	117	70		580	290
Beryllium									0.68	0.55
Calcium									1	1
Chromium	13,500*	11,100*	2310*	25,100*	50,500*	22,300*	96,200*		18,000	3,200
Cobalt	7.9	5.1		128	8.5	7.3	6.2		41	33
Copper	11	8.5	11	9.9	9.4	12			7.1	5.9
Iron	9970	10,800	9350	10,500	8430	11800	5680		21	13
Lead	6.1R	8.5R	9.2R	6.4R	5.1R	6.9R	4.8R		21,000	14,000
Magnesium	7320	5940	1390	13,500	6700	11,700	3720		17	14
Manganese	439R	594R	342R	650R	274R	702R	482R		7,800	2,300
Mercury	0.070	0.063	0.075	0.045	0.084	0.070	0.042		380	260
Nickel	10			34		11			0.046	0.081
Potassium	823	277	736		975		453		15	11
Selenium									.23	.30
Silver									-	-
Sodium	627	628	568	597	594	642	532		10,000	2,600
Thallium									9.1	7.7
Zinc									.90	.96
Vanadium	16					16			70	43
Chloride	39	37	31	38	38	46	17		55	40
Station No.	F2	G1	G2	H1	H2	I1	I2			
Sample location	INACTIVE IMPOUNDMENT, SOUTH POND (SUB-SURFACE)	INACTIVE IMPOUNDMENT, WEST POND	INACTIVE IMPOUNDMENT, WEST POND (SUB-SURFACE)	INACTIVE IMPOUNDMENT, WEST POND	INACTIVE IMPOUNDMENT, WEST POND (SUB-SURFACE)	INACTIVE IMPOUNDMENT, WEST POND	INACTIVE IMPOUNDMENT, WEST POND (SUB-SURFACE)		1. Values obtained from "Element Concentrations Soils and Other Surface Materials of the Conterminous United States", dated 1984. U.S.G.S. Professional Paper 1270. 2. Reference for East/West Division is the 96 W longitudinal line which bisects Region VI. 10/31/85	

-indicates a value estimated or not reported due to the presence of interference.

-spike sample recovery is not within control limits.

-duplicate analysis is not within control limits.

Cedar Chemical Corp.
ARD990660649
February 16, 1990

INTRODUCTORY NARRATIVE

Cedar Chemical is located just south of Helena-West Helena in the Helena-West Helena industrial park approximately 1 1/4 miles from the intersection of U.S. Hwy. 49 and AR Hwy. 242 on Hwy. 242. The plant was owned by several companies before Cedar Chemical Corporation and has historically manufactured insecticides, herbicides, polymers, and organic intermediates. The plant employs 80 to 90 people and operates 24 hours per day, 7 days per week. The plant currently manufactures, Propanil, Permethrin, Cypermethrin, DuPont CNT and Phillips MES, although the plant was designed to be versatile and is capable of manufacturing a variety of batch chemical processes. In addition to manufacturing, Cedar Chemical operates a biological treatment system for waste waters from some of the manufacturing processes. Some waste waters must be sent off-site for disposal due to the high toxicity, these wastes are accumulated in storage tanks and shipped off-site within 90 days. Cedar Chemical is currently a generator only and maintains 90 day storage in containers and tanks.

There are 3 pre-RCRA surface impoundments that were closed by Helena Chemical, operators at the time, in 1978. These closed ponds were used for disposal and treatment of unknown wastes by previous owners. The plant was known to produce methoxychlor, dinitro herbicides and many other pesticides during the active life of these ponds. Ecology and Environment, Inc. was tasked by the US EPA to conduct a sampling mission on October 19, 1985, to evaluate both surface and subsurface soil samples in the closed pond area. The Ecology and Environment investigation shown that both the surface and subsurface soils of the closed impoundments were contaminated with a variety of pesticides and recommended that monitoring wells be installed around the perimeter of the ponds to detect groundwater contamination. Wells were not installed around these ponds but an approved monitoring system was installed as part of CAO LIS 86-027 dated July 16, 1987.

Several areas around the plant ground were observed to contain yellow-colored soils. This is a result of the former operators, Ansel Corporation, burying dinitro herbicides (Dinoseb) on site according to information I have reviewed. There is no information available regarding the type, quantity or location of these wastes. Approximately 250 drums of herbicide wastes are buried under the warehouse foundation. An accurate description of these wastes is presently not available. Vertac Chemical was the operators who encapsulated these drums.

On April 6, 1990, ADPC&E was notified by Cedar Chemical of 8 drums being dug up as a result of a construction project on the stormwater drainage system. An investigation has been proposed but has presently not begun.

Cedar Chemical entered a Consent Administrative Order (LIS 86-027) on July 16, 1987, as a result of the May 30, 1986, inspection by ADPC&E. Events of the CAO are as follows:

ARD 990660649

4781

CASE NUMBER:

SITE NAME/CODE: Vertac, W Helena AR 361

EPA Sample Numbers	
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
35	36
37	38
39	40
41	42
43	44
45	46
47	48
49	50
51	52
53	54
55	56
57	58
59	60
61	62
63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

Drinking Water Criteria

Primary

Secondary

	50
--	----

1000

10

50

1000

300

50

50

2

10

50

5000

Station No.

ample

tation.

location

RINSATE

BLANK

RINSTATE

BLANK

RINSATE	
---------	--

BLANK

-Indicates a value estimated or not reported due to the presence of interference.

-spike sample recovery is not within control limits.

-duplicate annalysis is not within control limits.

Site Name/Code Vertac, W. Helena AR 0361

Case Number 4781

1. Priority Pollutant.
2. Specified Hazardous Substance.
3. Tentatively Identified.

VOA - Volatile
ABN - Acid Base/Neutral
Pest - Pesticide

B - The analyte is found in the lab blank.
J - Indicates an estimated value for tentatively identified compounds
compounds found below detection limit.
P - Present in sample, but not reported by lab.

Table II: ORGANIC ANALYSIS SUMMARY

Site Name/Code Vertac, W Helena AR 0361

Case Number 4781

Concentration ppb Page 1 of 4

Sample Station Number and Location	Scan No.	Fraction /Class	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	F1	F2
EPA SAMPLE NUMBER			FC280	FC289	FC281	FC290	FC282	FC293	FC283	FC294	FC284	FC295	FC285	FC296
MATRIX			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Methylene Chloride		VOA/1	9B	10B	12B	22B	9B	17B	840B	36B	21B	150B	6B	16B
Chloroform		VOA/1	7B	7B	6B	7B	7B	7B	840B		6B	110B		7B
Benzene		VOA/1	7B		7B				840B	6B	6B			
Toluene		VOA/1									6J			
1,1,1-trichloroethane		VOA/1		7J		7J								
1,2-dichloroethane		VOA/1										190		
Ethylbenzene		VOA/1												
Chlorobenzene		VOA/1												
Acetone		VOA/2				14B		13B	150B		12B		12B	12B
Total xylenes		VOA/2												
2-hexanone		VOA/2												
N-nitrosodiphenylamine		ABN/1	459J			465J	465J	436J		405J		475J		2078J
Phenol		ABN/1								1800		840		
1,2-dichlorobenzene		ABN/1								405J				
Bis-(2-ethylhexyl) phthalate		ABN/1				670		2900		405J		475J		
4,4-DDT		Pest/1			1813		26	22			30		34	
4,4-DDD		Pest/1			421									
Methoxychlor		Pest/1	3984	216	12,996		241	104.6J	106.8J	85,121	99.6J	114J	184	5659
Aldrin		Pest/1			596.1									1073.6
Dieldrin		Pest/1			1120			20.9J				22.8J		
Chlordane		Pest/1			3563									14,360
Gamma-BHC (lindane)		Pest/1										98.3		
Hexamethyldisiloxane		VOA/3	92JB	31JB	340JB	30JB	74JB	34JB	1500JB	190JB	280JB		36JB	20JB
Methoxybenzene		VOA/3					9J			1100J				13J
Unknown	62	VOA/3							1600J					
Unknown Alkane	247	VOA/3								400J				
Unknown Alkane	263	VOA/3								84J				
Unknown Alkane	441	VOA/3								9J				
1,2-dichloro-3-nitrobenzene		ABN/3												
Unknown Alkane	1510	ABN/3	590J				420J					380J	650J	
Unk. carboxylic acid	1518	ABN/3	390J				960J						450J	
Unk. polynuclear aromatic	1937	ABN/3												
Unknown Alkane	2222	ABN/3	1100J						280J				160J	
Unknown Alcohol	530	ABN/3		230J				80J				390J		
Unknown Amine	1798	ABN/3		230J				30J			300J		720J	
Unknown	1842	ABN/3		290J	2600J			1100J						
Unknown	508	ABN/3			2100J									
Unknown Ketone	1684	ABN/3			2500J			1100J						
Unknown Alkane	1677	ABN/3				260J						580J	660J	
Unknown	2394	ABN/3					810J					1400J	730J	
Unk. Substituted Benzene	401	ABN/3								1300J			240J	
Unknown Alkane	1025	ABN/3								480J				
Unknown Alkane	1218	ABN/3								510J				
Unknown Amine	1456	ABN/3								1000J				
Unknown	1580	ABN/3								1100J				1700J
Unk. Carboxylic Acid	1364	ABN/3										340J		
Unknown Alkane	1941	ABN/3											1700J	

1. Priority Pollutant.

2. Specified Hazardous Substance.

3. Tentatively Identified.

VOA - Volatile

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Cedar Chemical
ARD 990660649
2-16-90

Table II: ORGANIC ANALYSIS SUMMARY

Site Name/Code Vertac, W. Helena AR 0361

Case Number 4781

Concentration ppb

Page 2 of 4

[illegible]

1. Priority Pollutant.
2. Specified Hazardous Substance.
3. Tentatively Identified.

VOA - Volatile
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Table II: ORGANIC ANALYSIS SUMMARY

Concentration pp_b Page 3 of 4

Sample Station Number and Location	Scan No.	Fraction /Class	G1	G2	H1	H2	I1	I2						
EPA SAMPLE NUMBER			FC286	FC297	FC287	FC298	FC288	FC299						
MATRIX			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL						
Methylene Chloride		VOA/1	15B	2700B	2300B	3300B	17B	1710B						
Chloroform		VOA/1	7B	845B	790B		7B	1710B						
Benzene		VOA/1	7B	845B				1710B						
Fluorene		VOA/1		4000	790J	34,000		16,000						
1,1,1-trichloroethane		VOA/1					7J							
1,2-dichloroethane		VOA/1												
Ethylbenzene		VOA/1		845J		1600J		28,000						
Chlorobenzene		VOA/1						2600						
Acetone		VOA/2	13B	5200B	4600B		42B							
Total xylenes		VOA/2		1700		3300		180,000						
2-hexanone		VOA/2				75,000		75,000						
N-nitrosodiphenylamine		ABN/1	444J	2254J				13,680J						
Phenol		ABN/1		3100										
1,2-dichlorobenzene		ABN/1		2254J				30,000						
Bis(2-ethylhexyl) phthalate		ABN/1					440J							
4,4-DDT		Pest/1	25				21.3J							
4,4-DDE		Pest/1												
Methoxychlor		Pest/1	817	17,266	221		444	654,178						
Aldrin		Pest/1			37									
Dieldrin		Pest/1												
Chlordane		Pest/1												
Gamma-BHC (lindane)		Pest/1						4980						
Hexamethylcyclotrisiloxane		VOA/3	85JB	520JB	930JB	1000JB	860JB	46JB						
Methoxybenzene		VOA/3		28,000J		200,000J		140,000J						
Unknown 62		VOA/3		850J	2000J			2000J						
Unknown Alkane 247		VOA/3												
Unknown Alkane 263		VOA/3												
Unknown Alkane 441		VOA/3												
1,2-dichloro-3-nitrobenzene		ABN/3		15,000J				740,000J						
Unknown Alkane 1510		ABN/3												
Unk. carboxylic acid 1518		ABN/3												
Unk. polynuclear aromatic 1937		ABN/3												
Unknown Alkane 2222		ABN/3												
Unknown Alcohol 530		ABN/3					310J							
Unknown Amine 1798		ABN/3	250J				740J							
Unknown 1842		ABN/3	270J	1900J			230J							
Unknown 508		ABN/3												
Unknown Ketone 1684		ABN/3												
Unknown Alkane 1677		ABN/3												
Unknown 2394		ABN/3												
Unk. Substituted Benzene 401		ABN/3		3300J			380J	56,000J						
Unknown Alkane 1025		ABN/3		1900J				71,000J						
Unknown Alkane 1218		ABN/3												
Unknown Amine 1456		ABN/3		2200J				24,000J						
Unknown 1580		ABN/3												
Unk. Carboxylic Acid 1364		ABN/3												
Unknown Alkane 1941		ABN/3												

1. Priority Pollutant.
2. Specified Hazardous Substance.
3. Tentatively Identified.

VOA - Volatile
ABN - Acid Base/Neutral
Pest - Pesticide

B - The analyte is found in the lab blank.
J - Indicates an estimated value for tentatively identified compounds
compounds found below detection limit.
P - Present in sample, but not reported by lab.

Cedar Chemical
ARD 990660649
2-16-90

Table II: ORGANIC ANALYSIS SUMMARY
Case Number 4781

Concentration ppb Page 4 of 4

1. Priority Pollutant.
2. Specified Hazardous Substance.
3. Tentatively Identified.

VOA - Volatile
ABN - Acid Base/Neutral
Pest - Pesticide

B - The analyte is found in the lab blank.
J - Indicates an estimated value for tentatively identified compounds
compounds found below detection limit.
P - Present in sample, but not reported by lab.

Cedar Chemical
ARD 940606419
2-16-90

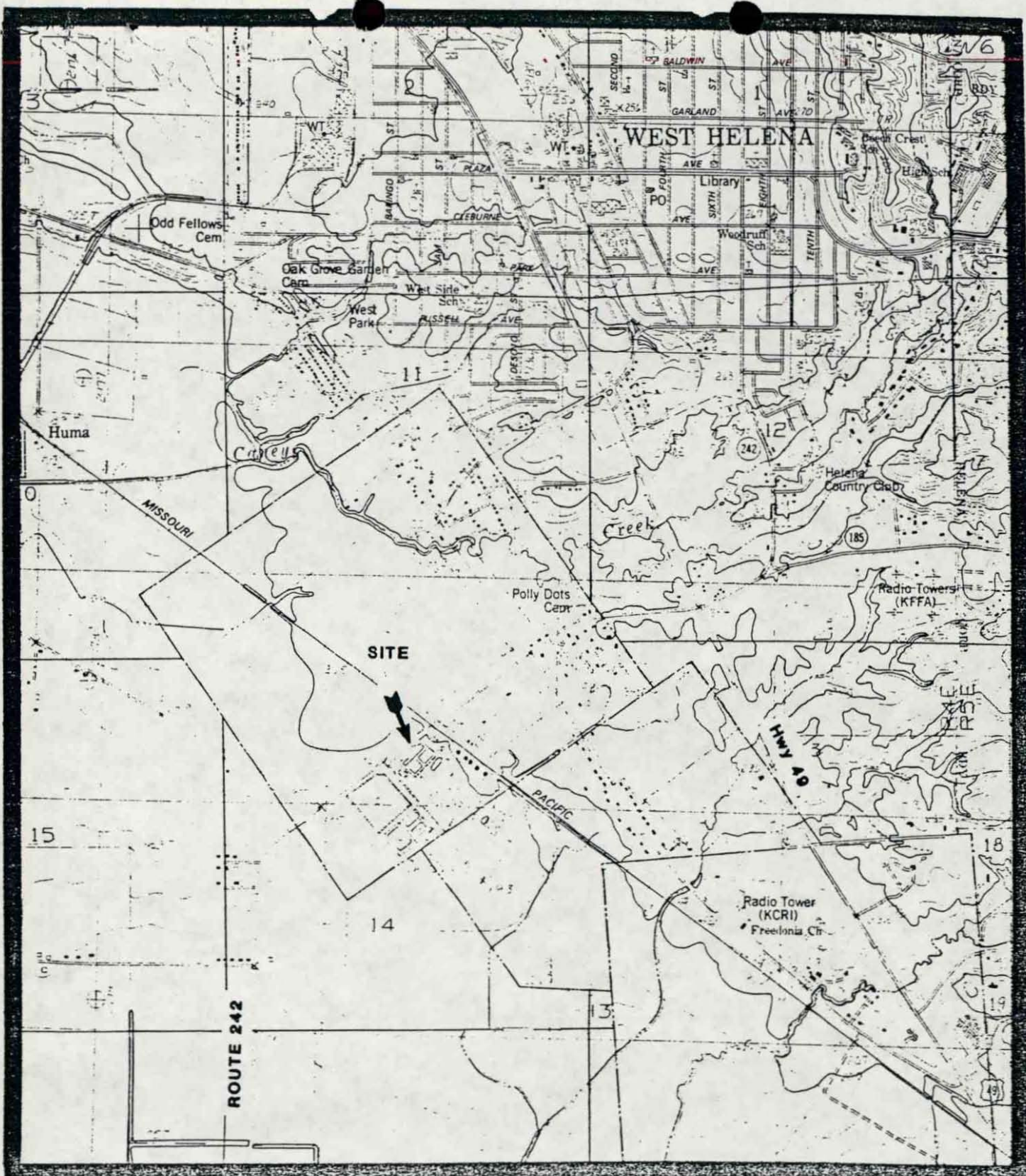


Figure 1. Site location map for the Vertac-West Helena site in West Helena, Arkansas (AR 361).

Scale: 1 inch \approx 2,000 Ft.



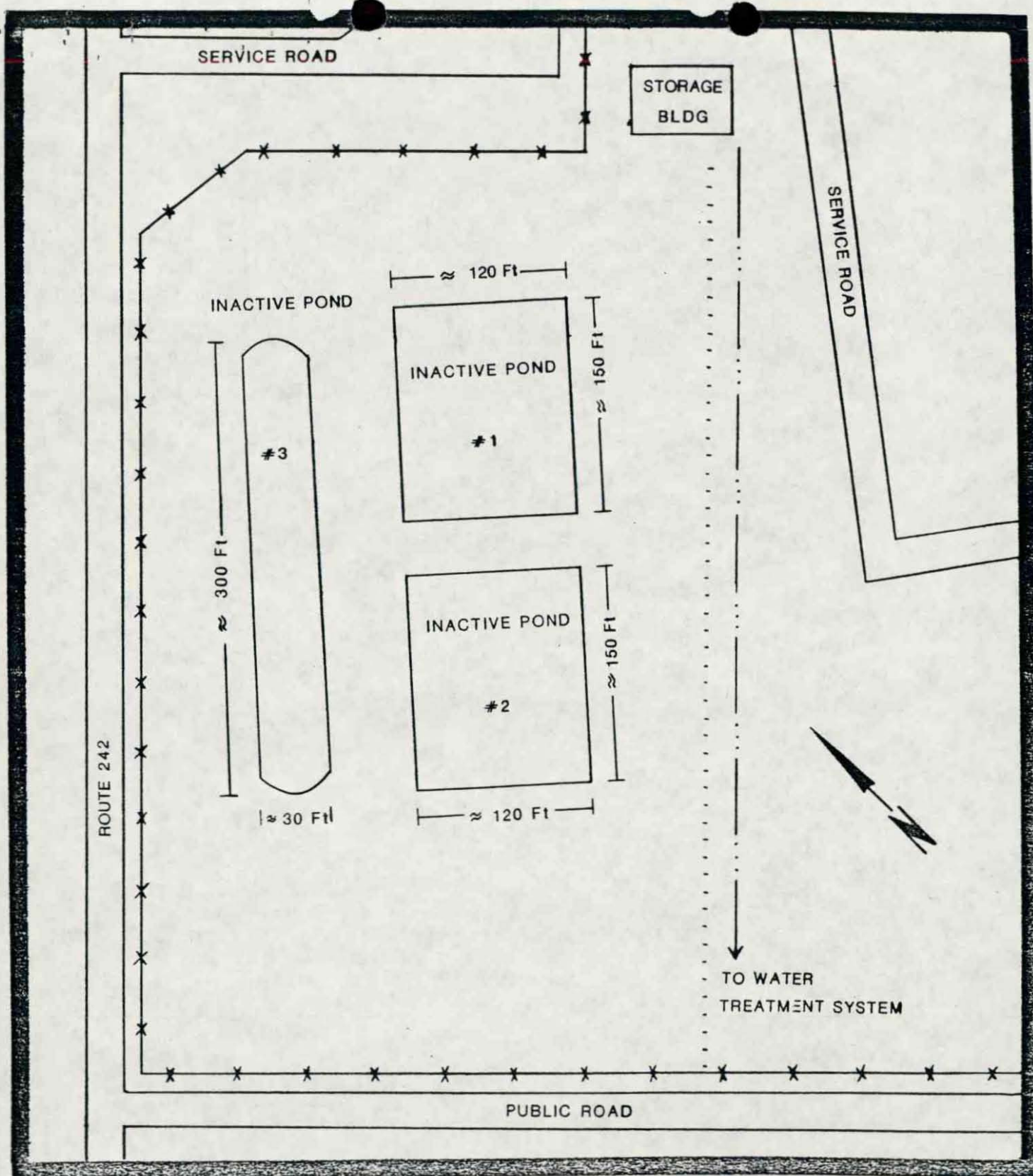


Figure 2. Site sketch of the inactive ponds located at the Vertac-West Helena site (AR 361). The pond boundaries and dimensions are estimates.

- - - Berm
 * - * Fence
 - - - - - Open culvert

Not drawn to scale

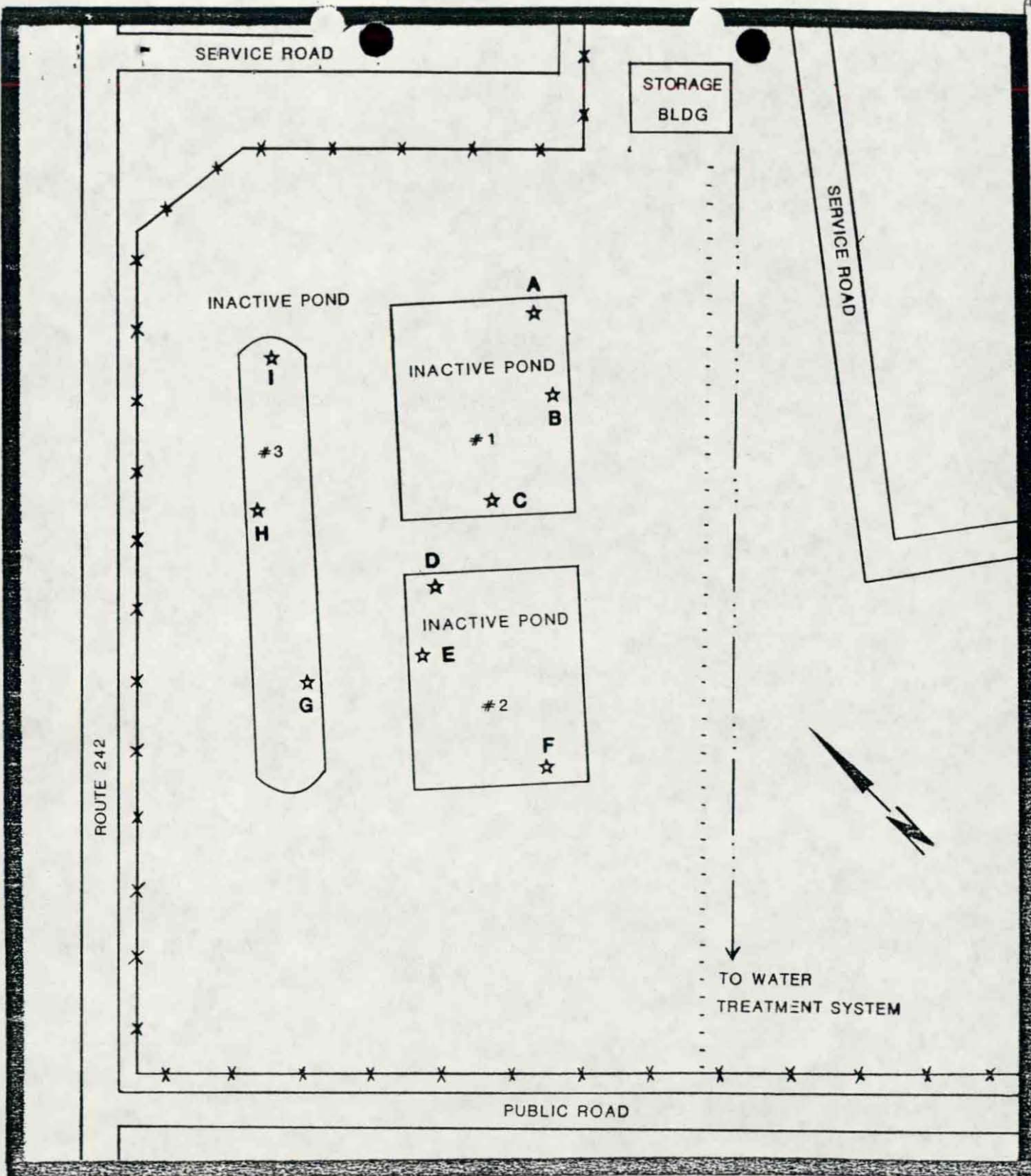


Figure 3. Sample station locations at the Vertac-West Helena site (AR 361).

☆ Sample stations

X — X Fence

- - - - -
Berm

← ... — Open culvert

Not drawn to scale

p. 42 of
110
Cedar Chemical
AR 990660649
2-16-90

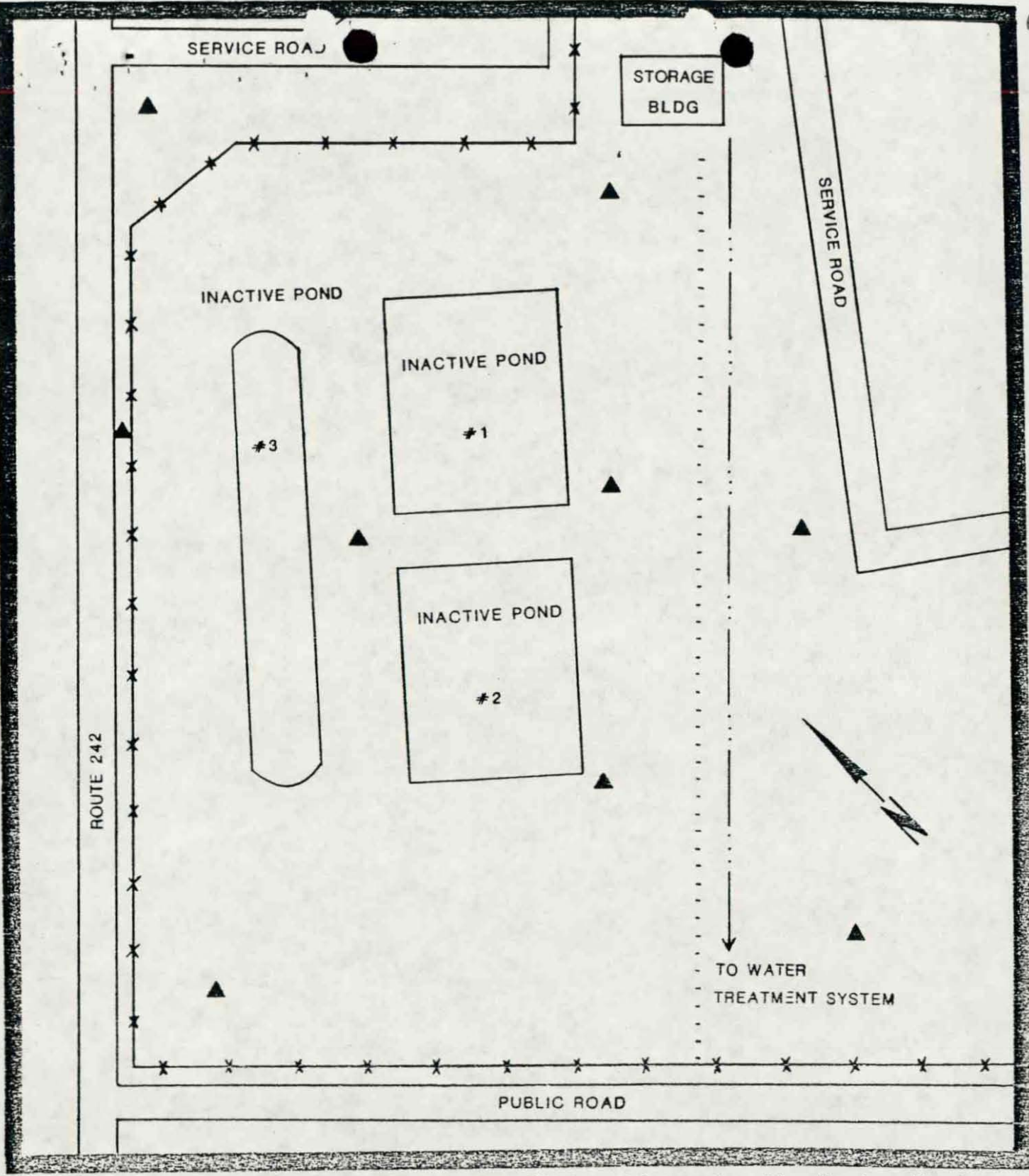


Figure 4. Proposed monitoring well locations for the Vertac-West Helena site (AR 361).

- ▲ Well locations
- X—X— Fence
- - - Berm
- ←...→ Open culvert

Not drawn to scale

p. 74 of 110
Cedar/Chemical
ARD 990660649
2-16-90

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: Aug 6, 1986

SUBJECT: Potential Hazardous Waste Site

FROM: Keith Bradley, FIT RPO
Hazardous Waste Section (6E-SH)

TO: Martha McKee, Chief
Compliance Section (6H-ES)

1986 AUG -7 AM 10:51

SUPERIOR ENVIRONMENTAL

RECEIVED
MAR 23 1990
RECEIVED

Site Name: Vertac - W Helena Site
Location: West Helena, AR
Hazard No.: AR 361
TDD No.: RG-8507-13

A. Deliverables:

- | | |
|---|--|
| 1. Preliminary Assessment (Form 2070-2) | attached () |
| 2. Site Inspection Report (Form 2070-3) | attached () |
| 3. Sampling Inspection Report | attached <input checked="" type="checkbox"/> |
| 4. Other: _____ | attached () |

B. Were drinking water wells sampled? Yes () No ☒

C. Analytical Data:

- | | |
|-------------------------|--|
| 1. None collected | () |
| 2. Field data | () |
| 3. Contract lab results | attached <input checked="" type="checkbox"/> |
| 4. Houston lab results | attached () |

D. Comments:

Pesticide contaminants were detected in
samples from this site. Due to the
groundwater use in this area FIT
recommends the installation of monitoring
wells.

A preliminary gw-sw use should be
prepared for this site.

cc: (circle) Cabra (6W-S)
Gazda (6E-E)
Taylor (6H-CE)

REGION 6

CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME		NO. OF CON- TAINERS		<div style="display: flex; justify-content: space-around;"> <div>Metals & Cyanide</div> <div>Metals</div> <div>Cyanide</div> </div>						REMARKS		
SAMPLERS (Signature)														
STA. NO.	DATE	TIME	COMP.										GRAB	STATION LOCATION
HR 301	Vertac, West Helena													
<i>W. J. ...</i> <i>...</i>														
A1	8/20/85	8:20		X		Inactive Impoundment, North Pond	/	/					6-11754	MFB 341
B1	8/20/85	8:42		X		Inactive Impoundment, North Pond	/	/					6-11767	MFB 342
C1	8/20/85	8:48		X		Inactive Impoundment, North Pond	/	/					6-11771	MFB 343
D1	8/20/85	8:53		X		Inactive Impoundment, South Pond	/	/					6-11777	MFB 344
E1	8/20/85	8:58		X		Inactive Impoundment, South Pond	/	/					6-11783	MFB 345
F1	8/20/85	9:02		X		Inactive Impoundment, South Pond	/	/					6-11791	MFB 346
G1	8/20/85	9:07		X		Inactive Impoundment, West Pond	/	/					6-11795	MFB 347
H1	8/20/85	9:12		X		Inactive Impoundment, West Pond	/	/					6-11806	MFB 348
I1	8/20/85	9:16		X		Inactive Impoundment, West Pond	/	/					6-11807	MFB 349
Blank	8/20/85	9:45		X		Field Rinseate Blank	2	2	1	1			6-12003, 6-12004	MFB 352
Blank	8/20/85	10:00		X		Field Rinseate Blank	2	2	1	1			6-12009, 6-12008	MFB 353
A2	8/20/85	12:27		X		Inactive Impoundment, North Pond	/	/					6-12014	MFB 350
C2	8/20/85	12:45		X		Inactive Impoundment, North Pond	/	/					6-12020	MFB 351
D2	8/20/85	13:23		X		Inactive Impoundment, North Pond	/	/					6-11953	MFB 354
D2	8/20/85	12:20		X		Inactive Impoundment, South Pond	/	/					6-11958	MFB 355
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)				
<i>W. J. ...</i>		8/20/85 12:00		<i>Mike Butler</i>		<i>Mike Butler</i>		8/20/85 13:00		<i>Federal Express</i>				
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)				
<i>W. J. ...</i>														
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature)		Date / Time		Remarks						
<i>W. J. ...</i>								Station H1 & AQC Airbill No. 851264642 B-1146 Lot #1's 45149172 Case No. 4781						

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

6-5082

A. 4608 110

6-5886

CHAIN OF CUSTODY RECORD

[illegible]

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

8-5881

PROJ. NO.		PROJECT NAME		NO. OF CONTAINERS		REMARKS					
SAMPLERS: (Signature)											
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Extrudables (soil)	Pesticides (soil)	Extrudables (water)	Pesticides (water)	VOA (soil)	VOA (water)
E2	08/21/85	0800-0840		X	Subsurface, Inactive Impoundment South Pond	4 1/2	1	1	2	6-11821 ✓	6-11819 ✓
F2	08/21/85	0805-0850		X	Subsurface, Inactive Impoundment South Pond	4 1/2	1	1	2	6-11820 ✓	6-12023 ✓
G2	08/21/85	0830-0850	ID	X	Subsurface, Inactive Impoundment West Pond	4 1/2	1	1	2	6-11825 ✓	6-11827 ✓
H2	08/21/85	0830-0855	ID	X	Subsurface, Inactive Impoundment West Pond	4	1	1	2	6-11826 ✓	6-11828 ✓
I2	08/21/85	1000-1030		X	Subsurface, Inactive Impoundment West Pond	4	1	1	2	6-11831 ✓	6-11833 ✓
Blank	08/21/85	1050-1100		X	Rinsate Blank	6			2	6-11832 ✓	6-11834 ✓
										6-11837 ✓	6-11839 ✓
										6-11838 ✓	6-11840 ✓
										6-11844 ✓	6-11845 ✓
										6-11841 ✓	6-11846 ✓
										6-11851 ✓	6-11853 ✓
										6-11852 ✓	6-11854 ✓
										6-11855 ✓	6-11855 ✓

Relinquished by: (Signature) *William L. Galt*

Relinquished by: (Signature)

Relinquished by: (Signature)

Date / Time: 8/21/85 11:21

Date / Time

Date / Time

Received by: (Signature) *Miller, Sullivan*

Received by: (Signature)

Received for Laboratory by: (Signature)

Date / Time: 8/21/85 13:00

Date / Time

Date / Time

Received by: (Signature) *Federal Express*

Received by: (Signature)

Remarks: Federal Express Airbill #851764686

Case # 4781

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

6-5887

CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME		NO. OF CONTAINERS		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Pesticides</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Extinctibles</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">VOA</div> </div>										REMARKS	
SAMPLERS: (Signature)																	
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION												
A2	8/20/85	12:27 12:41		X	Inactive Impoundment, North Pond	4	1"	1"	2"					6-12017, 6-12013			FC 289
B2	8/20/85	12:30 12:45		X	Inactive Impoundment, North Pond	4	1"	1"	2"					6-12022, 6-12021			FC 290
	8/20/85	13:17 13:28		X	Inactive Impoundment, North Pond	4	1"	1"	2"					6-12014, 6-12015			FC 293
D2	8/20/85	13:30 14:20		X	Inactive Impoundment, South Pond	4	1"	1"	2"					6-11952, 6-11953			FC 294
Blank	8/20/85	9:45 9:50		X	Field Rinseate Blank	6	2"	2"	2"					6-11954, 6-11951			FC 291
Blank	8/20/85	13:50 14:00		X	Field Rinseate Blank	6	2"	2"	2"					6-11956, 6-11959			FC 292
													6-12008, 6-12007, 6-12501				
													6-12005, 6-12006, 6-12007				
													6-12502, 6-12013, 6-12011				
													6-12010, 6-12504, 6-12503				

Relinquished by: (Signature) *Walter Ray Thomas Jr.*

Relinquished by: (Signature) _____

Relinquished by: (Signature) _____

Date / Time 8/20/85 15:00

Date / Time _____

Date / Time _____

Received by: (Signature) *Mark Ballen*

Received by: (Signature) _____

Received for Laboratory by: (Signature) _____

Relinquished by: (Signature) *Mark Ballen*

Relinquished by: (Signature) _____

Date / Time _____

Date / Time 8/20/85 13:00

Date / Time _____

Date / Time _____

Received by: (Signature) *Federal Express*

Received by: (Signature) _____

Remarks *Amkill #PS1 764 664*

Bottle Lot #s 652 04 212 Case # 4781

652 04 222 252 01352

551 72 212

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

6-5385



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

1201 ELM STREET
DALLAS, TEXAS 75270p. 50 of 110
Cedar Chemical
ARD 990660649
2-16-908/20/85
(Date)RECEIPT FOR SAMPLES

NAME AND TITLE OF EPA REPRESENTATIVE:

Miles BoltonFIT Ground Water HydrologistMiles W. Bolton
(Signature)SAMPLES COLLECTED:

SAMPLE NUMBER	TIME	PLACE COLLECTED	TYPE	VOLUME	SPLIT SAMPLE	
					REQUESTED	PROVIDED
<u>6-11815</u>	<u>12:27</u> <u>12:41</u>	<u>Subsurface</u> <u>Inertive Impoundment</u> <u>North Pond</u>	<u>Subsurface</u> <u>soil</u>	<u>3203</u>	<u>Yes</u>	<u>Yes</u>
<u>6-11816</u>	<u>1230</u> <u>1245</u>	<u>Subsurface</u> <u>Inertive Impoundment</u> <u>North Pond</u>	<u>Subsurface</u> <u>soil</u>	<u>3203</u>	<u>Yes</u>	<u>Yes</u>
<u>6-11817</u>	<u>1317</u> <u>1328</u>	<u>Inertive Impoundment</u> <u>North Pond</u>	<u>Subsurface</u> <u>soil</u>	<u>3203</u>	<u>Yes</u>	<u>Yes</u>
<u>6-11818</u>	<u>1320</u> <u>1330</u>	<u>Inertive Impoundment</u> <u>South Pond</u>	<u>Subsurface</u> <u>soil</u>	<u>3203</u>	<u>Yes</u>	<u>Yes</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

ACKNOWLEDGEMENT OF FACILITY REPRESENTATIVE

The undersigned acknowledges that the samples described above have been collected.

NAME, TITLE AND ADDRESS OF FACILITY REPRESENTATIVE:

JOE E. PORTER - Environmental Engineer 501-572-3701
Vertac Chemical Corp - West Helena Plant
P.O. Box 2749 - West Helena, AR 72390JOE E. PORTER
(Signature)August 20, '85
(Date)DISTRIBUTION:One copy facility representative
One copy for inspector's records
Original to Regional Office



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

1201 ELM STREET
DALLAS, TEXAS 75270p. 51 of 110
Cedar Chemical
ARD990660699
2-16-808/21/85
(Date)RECEIPT FOR SAMPLES

NAME AND TITLE OF EPA REPRESENTATIVE:

Miles BoltonFIT Grand Water HydrologistMiles W. Bolton

(Signature)

SAMPLES COLLECTED:

SAMPLE NUMBER	TIME	PLACE COLLECTED	Soil TYPE	VOLUME	SPLIT SAMPLE	
					REQUESTED	PROVIDED
<u>E 2</u>	<u>0820</u> <u>0840</u>	<u>SubSurface</u> <u>South Pond</u>	<u>Organic</u> <u>Inorganic</u> <u>VOH</u>	<u>1602</u> <u>802</u> <u>340 ml</u>	<u>yes</u>	<u>yes</u>
<u>F 2</u>	<u>0825</u> <u>0850</u>	<u>"</u>	<u>Organic</u> <u>Inorganic</u> <u>VOH</u>	<u>"</u>	<u>"</u>	<u>"</u>
<u>G 2</u>	<u>0930</u> <u>0950</u>	<u>SubSurface</u> <u>West Pond</u>	<u>Organic</u> <u>Inorganic</u> <u>VOH</u>	<u>"</u>	<u>"</u>	<u>"</u>
<u>H 2</u>	<u>0930</u> <u>0955</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>
<u>I 2</u>	<u>1026</u> <u>1035</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

ACKNOWLEDGEMENT OF FACILITY REPRESENTATIVE

The undersigned acknowledges that the samples described above have been collected.

NAME, TITLE AND ADDRESS OF FACILITY REPRESENTATIVE:

Joe E. Porter - Environmental EngineerVerbac Chemical Corp - West Helena PlantPO Box 2149 - West Helena, AR 72390Joe E. Porter

(Signature)

August 21, 1985

(Date)

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REGION VI
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DALLAS, TEXAS 75270

p. 52 of 110
Cedar Chemical
ARD 990660649
7-16-90

8/21/85
(Date)

RECEIPT FOR SAMPLES

NAME AND TITLE OF EPA REPRESENTATIVE:

Miles Bolton

FIT Ground Water Hydrologist

Miles W. Bolton
(Signature)

SAMPLES COLLECTED:

<u>SAMPLE NUMBER</u>	<u>TIME</u>	<u>PLACE COLLECTED</u>	<u>TYPE</u>	<u>VOLUME</u>	<u>SPLIT SAMPLE</u>	
					<u>REQUESTED</u>	<u>PROVIDED</u>
<u>6-11823</u>	<u>0820</u> <u>0840</u>	<u>Inactive Impoundment</u> <u>South Pond</u>	<u>surface</u> <u>soil</u>	<u>32.02</u>	<u>yes</u>	<u>yes</u>
<u>6-11824</u>	<u>0825</u> <u>0850</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>
<u>6-11830</u>	<u>0930</u> <u>0950</u>	<u>Inactive Impoundment</u> <u>West Pond</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>
<u>6-11836</u>	<u>0930</u> <u>0955</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>
<u>6-11843</u>	<u>1020</u> <u>1035</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

ACKNOWLEDGEMENT OF FACILITY REPRESENTATIVE

The undersigned acknowledges that the samples described above have been collected.

NAME, TITLE AND ADDRESS OF FACILITY REPRESENTATIVE:

Joe E. Porter - Environmental Engineer
Vertac Chemical Corp - West Helena Plant
PO Box 2749 - West Helena, AR 72390

Joe E. Porter
(Signature)

August 21, 1985
(Date)

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
1201 ELM STREET
DALLAS, TEXAS 75270

p. 53 of 110
Cedar Chemical
ARD 990660649
2-16-90

8/20/85
(Date)

RECEIPT FOR SAMPLES

NAME AND TITLE OF EPA REPRESENTATIVE:

Miles Bolton

FII-Grand Water Hydrologist

Miles W. Bolton
(Signature)

SAMPLES COLLECTED:

SAMPLE NUMBER	TIME	PLACE COLLECTED	TYPE	VOLUME	SPLIT SAMPLE REQUESTED	SPLIT SAMPLE PROVIDED
6-11765	8:28 - 8:36	Inactive Impoundment North Pond	Surface Soil	32 oz	yes	yes
6-11770	8:39 - 8:42	Inactive Impoundment North Pond	Surface Soil	"	yes	yes
6-11776	8:45 - 8:48	Inactive Impoundment North Pond	Surface Soil	"	yes	yes
6-11782	8:50 - 8:53	Inactive Impoundment South Pond	Surface Soil	"	yes	yes
6-11788	8:52 - 8:58	Inactive Impoundment South Pond	Surface Soil	"	yes	yes
6-11789	9:00 - 9:02	Inactive Impoundment South Pond	Surface Soil	"	yes	yes
6-11800	9:05 - 9:07	Inactive Impoundment West Pond	Surface Soil	"	yes	yes
6-11801	9:08 - 9:12	Inactive Impoundment West Pond	Surface Soil	"	yes	yes
6-11812	9:14 - 9:16	Inactive Impoundment West Pond	Surface Soil	"	yes	yes

ACKNOWLEDGEMENT OF FACILITY REPRESENTATIVE

The undersigned acknowledges that the samples described above have been collected.

NAME, TITLE AND ADDRESS OF FACILITY REPRESENTATIVE:

JOE E. PORTER - Environmental Engineer
Verbac Chemical Corp - West Helena Plant
P.O. Box 2749 - West Helena, AR 72390
501-572-3701

JOE E. PORTER
(Signature)

August 20, 85
(Date)

DISTRIBUTION:

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
1201 ELM STREET
DALLAS, TEXAS 75270

p. 54 of 110
Cedar Chemical
ARD 990660649
7-16-90

8/20/85
(Date)

RECEIPT FOR SAMPLES

NAME AND TITLE OF EPA REPRESENTATIVE:

Miles W. Bolton

FIT Groundwater Hydrologist

Miles W. Bolton

(Signature)

SAMPLES COLLECTED:

SAMPLE NUMBER	TIME	PLACE COLLECTED	Soil TYPE	VOLUME	SPLIT SAMPLE	
					REQUESTED	PROVIDED
A1	0828 0836	North Impoundment	Organics Inorganics VOA	1602 802 240 ml	yes	yes
B1	0839 0842	" "	Organic Inorganic VOA	1602 802 240 ml	" "	" "
C1	0845 0848	" "	Organic Inorganic VOA	" "	" "	" "
D1	0850 0853	South Impoundment	Organic Inorganic VOA	" "	" "	" "
E1	0852 0858	" "	Organic Inorganic VOA	" "	" "	" "
F1	0900 0902	" "	Organic Inorganic VOA	" "	" "	" "
G1	0905 0907	West Impoundment	Organic Inorganic VOA	" "	" "	" "
H1	0908 0912	" "	Organic Inorganic VOA	" "	" "	" "
I1	0914 0916	" "	Organic Inorganic VOA	" "	" "	" "

ACKNOWLEDGEMENT OF FACILITY REPRESENTATIVE

The undersigned acknowledges that the samples described above have been collected.

NAME, TITLE AND ADDRESS OF FACILITY REPRESENTATIVE:

Joe E. Porter - Environmental Engineer
Verzinc Chemical Corp - West Helena Plant
PO Box 2749 - West Helena, AR 72390

Joe E. Porter

(Signature)

August 21, 1985

(Date)

DISTRIBUTION:

One copy facility representative
One copy for inspector's records
Original to Regional Office



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

1201 ELM STREET
DALLAS, TEXAS 75270p. 55 of 110
Cedar Chemical
ARD 990660649
2-16-908/20/85
(Date)RECEIPT FOR SAMPLES

NAME AND TITLE OF EPA REPRESENTATIVE:

Miles BoltonFIT Ground water HydrologistMiles W. Bolton
(Signature)SAMPLES COLLECTED:

SAMPLE NUMBER	TIME	PLACE COLLECTED	Soil TYPE	VOLUME	SPLIT SAMPLE	
					REQUESTED	PROVIDED
<u>A2</u>	<u>1227</u> <u>1241</u>	<u>Subsurface</u> <u>North Impoundment</u>	<u>Organic</u> <u>Inorganic</u> <u>WA</u>	<u>1002</u> <u>802</u> <u>240ml</u>	<u>yes</u>	<u>yes</u>
<u>B2</u>	<u>1230</u> <u>1245</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>
<u>C2</u>	<u>1317</u> <u>1328</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>
<u>D2</u>	<u>1320</u> <u>1330</u>	<u>Subsurface</u> <u>South Impoundment</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

ACKNOWLEDGEMENT OF FACILITY REPRESENTATIVE

The undersigned acknowledges that the samples described above have been collected.

NAME, TITLE AND ADDRESS OF FACILITY REPRESENTATIVE:

JOE E. PORTER - Environmental Engineer
Vertac Chemical Corp - West Helena Plant
PO Box 2649 - West Helena, AR 72390JOE E. PORTER
(Signature)August 21, 1985
(Date)DISTRIBUTION:One copy facility representative
One copy for inspector's records
Original to Regional Office

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Cedar Chemical
ARD 990660649
2-16-90

Miles Bolton / Weldon Day

Date / Time / Direction

8/20/85 / 8:50 / Southwest → Southeast

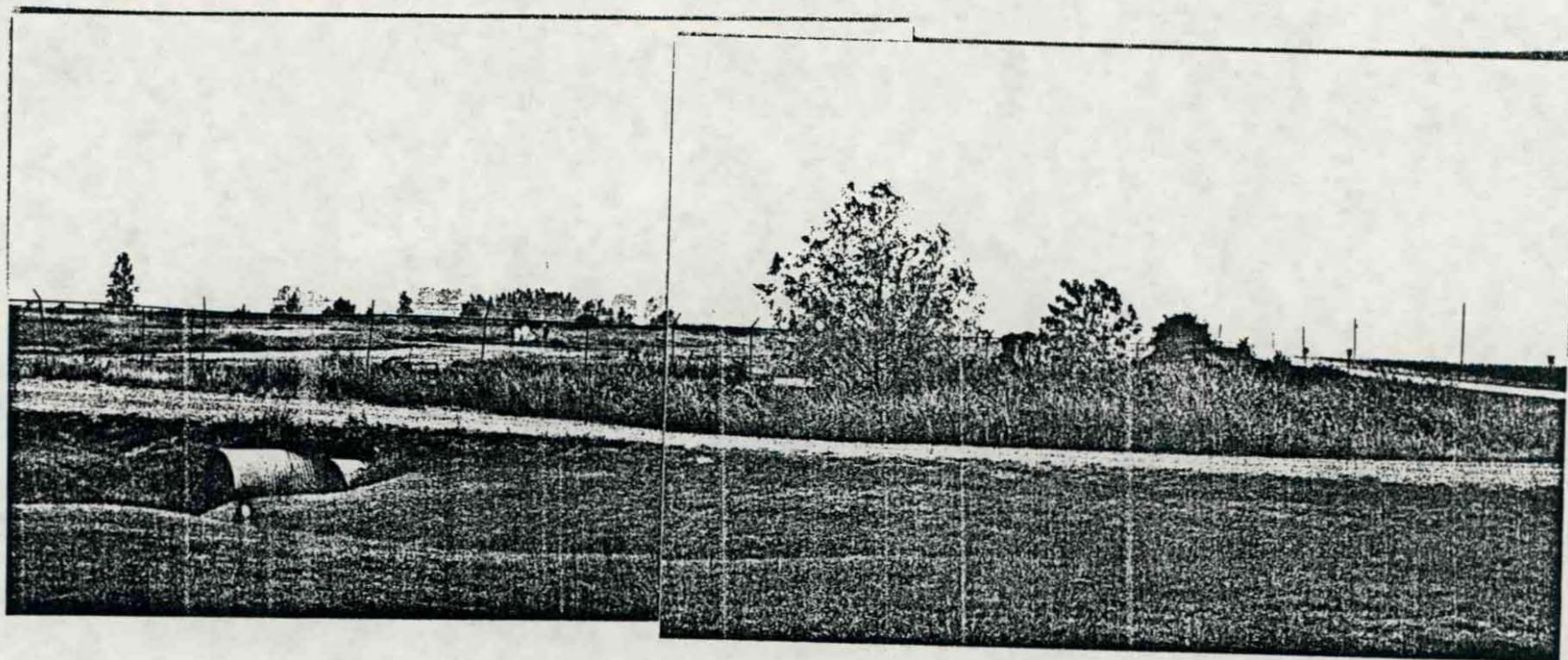
Comments: photographs 1 & 2

Panoramic view of the

Vertac, West Helena site.

Samples are being collected at the site.

Vertac, West Helena site
West Helena, AR (AR361)



Miles Bolton / Weldon Day

Date / Time / Direction

8/20/85 / 8:50 / South east

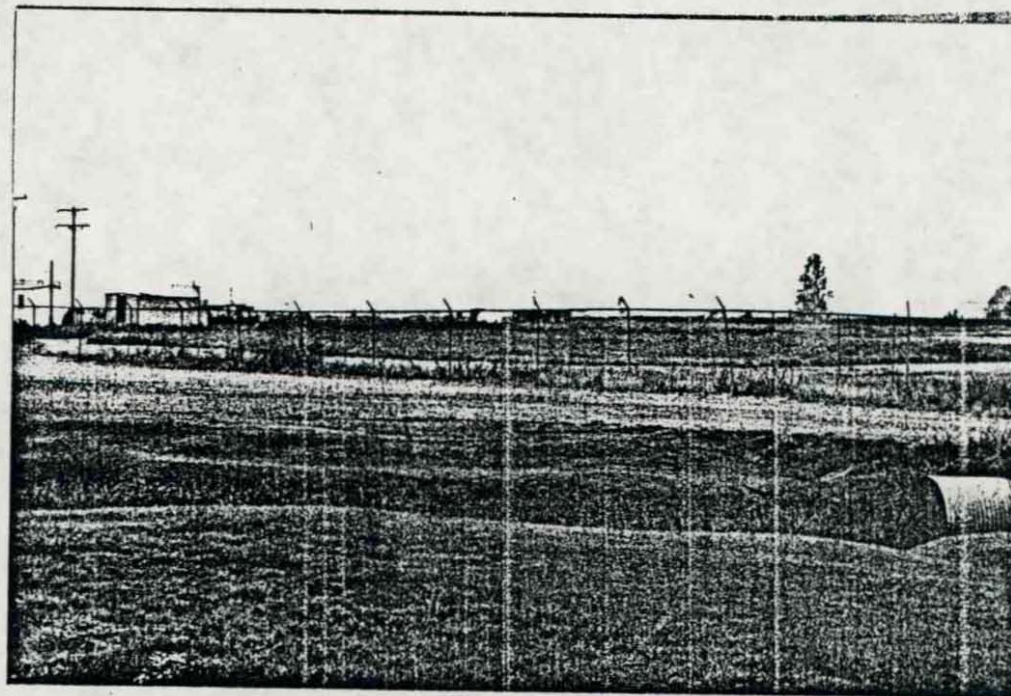
Comments: Photograph 3

Panoramic View continued.

Vertac - West Helena site

West Helena, AR (AR 361)

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Cedar Chemical
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ARD 990660649
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Photographer / Witness

Miles Bolton / Weldon Day

Date / Time / Direction

8/20/85 / 12:42 / East

Comments: Photograph 4

Sample station A



Photographer / Witness

Miles Bolton / Weldon Day

Date / Time / Direction

8/20/85 / 12:47 / East

Comments: Photograph 5

Sample station B



Photographer / Witness

Miles Bolton / Weldon Day

Date / Time / Direction

8/20/85 / 13:30 / East

Comments: Photograph 6

Sample station C

Vertec - West Helena site
West Helena, AR
(AR 361)



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2-16-90

Photographer / Witness

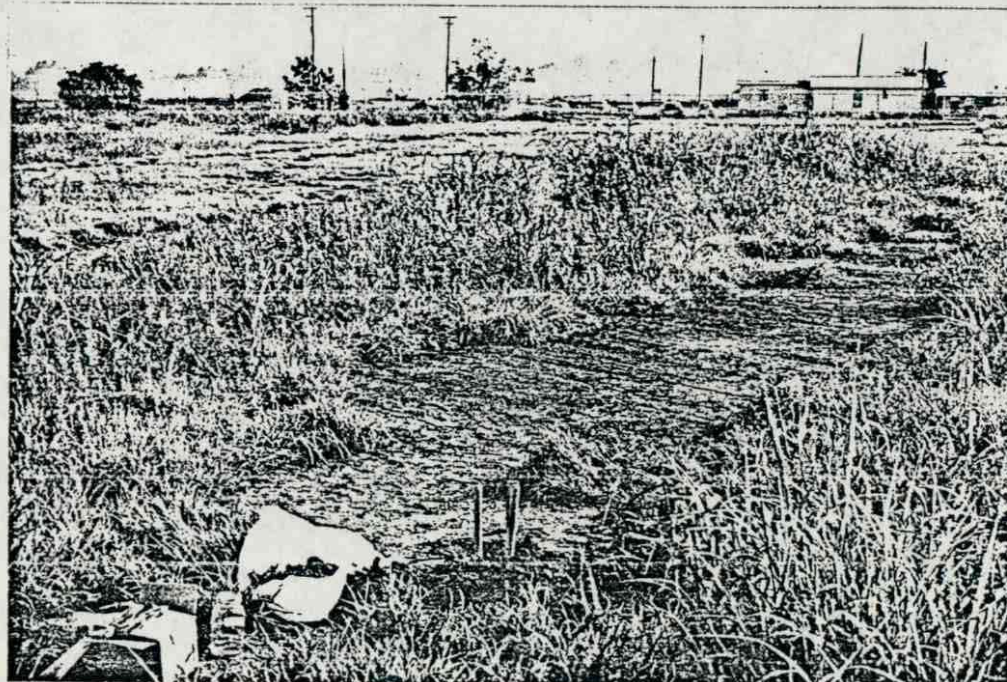
Miles Bolton / Weldon Day

Date / Time / Direction

8/20/85 / 13:32 / East

Comments: Photograph 7

Sample station D



Photographer / Witness

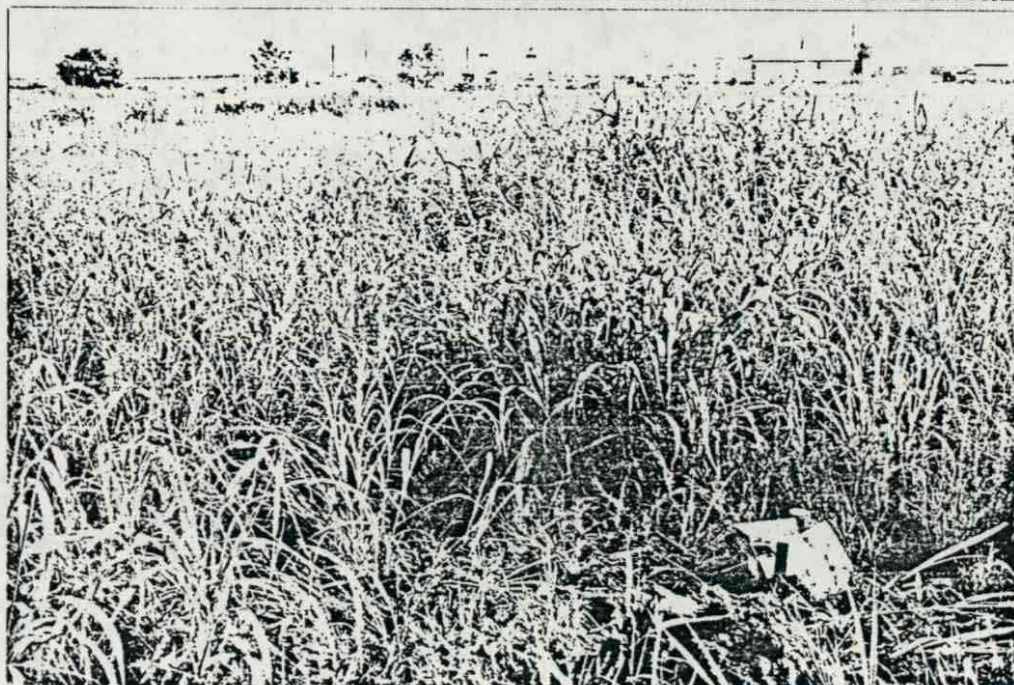
Miles Bolton / Weldon Day

Date / Time / Direction

8/21/85 / 8:43 / North

Comments: Photograph 8

Sample station E



Photographer / Witness

Miles Bolton / Weldon Day

Date / Time / Direction

8/21/85 / 8:53 / North

Comments: Photograph 9

Sample station F

Vertec - West Helena
West Helena, AR
(AR 361)

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Cadav Chemical
ARD 990660649
2-16-90



Photographer / Witness

Miles Bolton / Weldon Day

Date / Time / Direction

8/21/85 / 9:52 / South

Comments: Photograph 10

Sample station G



Photographer / Witness

Miles Bolton / Weldon Day

Date / Time / Direction

8/21/85 / 9:54 / North

Comments: Photograph 11

Sample station H



Photographer / Witness

Miles Bolton / Weldon Day

Date / Time / Direction

8/21/85 / 10:36 / South

Comments: Photograph 12

Sample station I

Vertical - West Helena
West Helena, AR
(AR 361)

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Cedar Chemical
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RCRA COMPLIANCE INSPECTION REPORT
GENERATORS CHECKLIST

Note: On multiple part questions, circle those not in compliance.

Section A - EPA Identification NO.

1. Does Generator have EPA I.D. NO.? (262.12 - EPA I.D. No.) ☒ Yes ☐ No

a. If yes, EPA I.D. No. ARD 990660649

Section B - Hazardous Waste Determination

1. Does generator generate hazardous waste(s) listed in Subpart D (261.30 - 261.33 - List of Hazardous Waste)

a. If yes, list wastes and quantities on attachment

(Include EPA Hazardous Waste No.)

Not in last 2 years.

(Provide waste name and description.)

☐ Yes ☒ No

2. Does generator generate solid waste(s) that exhibit hazardous characteristics? (corrosivity, ignitability, reactivity, EP toxicity) (261.20 - 261.24 - Characteristics of Hazardous waste.)

☒ Yes ☐ No

a. If yes, list wastes and quantities on attachment. (Include EPA Hazardous Waste No.) (Provide waste name and description)

See Generator Narrative Attachment

b. Does generator determine characteristics by testing or by applying knowledge of processes? Both testing and knowledge

1. If determined by testing, did generator use test methods in Part 261, Subpart C (or Equivalent)?

☒ Yes ☐ No

2. If equivalent test methods used, attach copy of equivalent methods used. *N/A*

3. Are there any other solid wastes deemed non-hazardous generated by generators? (i.e. process waste streams, collected matter from air pollution control equipment, water treatment sludge, etc.)

☒ Yes ☐ No

a. If yes, did generator determine non-hazardous characteristics by testing or knowledge of process?

Both testing and knowledge

1. If determined by testing, did generator use test methods in Part 261, Subpart C (or Equivalent)?

☒ Yes ☐ No

2. If equivalent test methods used, attach copy of equivalent methods used. *N/A*

b. List wastes and quantities deemed non-hazardous or processes from which non-hazardous wastes were produced. (Use narrative explanations sheet.)

See Generator Narrative Attachment

4. Are any wastes recycled, reused or reclaimed on-site?

☒ Yes ☐ No

If yes, use narrative to describe the type and quantity of the waste and the method used for reclamation.

See Generator Narrative Attachment

Site Name: Cedar Chemical
 I.D. Number: ARD990660649
2-16-90

5. Are any wastes shipped off-site for reclamation?

Not at time of inspection.

If yes, use narrative to describe the type and quantity of the waste and its destination. Also give a description of storage prior to shipment.

DAH
2-16-90
Yes ☒ No

N/A

Section C - Manifest

1. Does generator ship hazardous waste off-site?
 (Subpart B - The Manifest)

☒ Yes ☐ No

a. If no, do not fill out Section C and D.

b. If yes, identify primary off-site facility(s). (Use narrative explanations sheet.)

2. Has generator shipped hazardous waste off-site since November 19, 1980?

☒ Yes ☐ No

3. Is generator exempted from regulation because of:

Small quantity generator (261.5 - Special requirements)

☐ Yes ☒ No

OR

Produces non-hazardous waste at this time
 (261.4 - Exclusions)

☐ Yes ☒ No

4. If not exempted does generator use manifest?
 (262.20 - General requirements)

☒ Yes ☐ No

a. If yes, does manifest include the following information (262.21 - Required information)
 (Break up items or circle ones not on manifest)

1. Manifest Document No.

☒ Yes ☐ No

2. Generators Name, Mailing Address, Tele. No.

☒ Yes ☐ No

3. Generator EPA I.D. No.

☒ Yes ☐ No

4. Transporter(s) Name and EPA I.D. No.

☒ Yes ☐ No

5. a. Facility Name, Address and EPA I.D. No.

☒ Yes ☐ No

6. DOT description of the waste

☒ Yes ☐ No

7. a. Quantity (weight or volume)
 b. Containers (type and number)

☒ Yes ☐ No

☒ Yes ☐ No

8. Emergency Information (optional)
 (special handling instructions, Phone No.)

☒ Yes ☐ No

Effective 9. Waste minimization certification
 9/1/85

☒ Yes ☐ No

Site Name: Cedar Chemical
 I.D. Number: ARD990660649
2-16-90

9. Is the following certification on each manifest form?

☒ Yes ☐ No

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the EPA.

5. Does generator retain copies of manifests?

☒ Yes ☐ No

(Check completed manifests at random. Indicate how many manifests were inspected, how many violations were noted and the type of violation.)

If yes, complete a through e. If questions contain more than one item, circle those not in compliance. (263.23 Use of the Manifest)

- a. (1) Did generator sign and date all manifests inspected?

☒ Yes ☐ No

(2) Who signed for generator? Name Joe Porter Title Environmental Engineer

- b. (1) Did generator obtain handwritten signature and date of acceptance from initial transporter?

☒ Yes ☐ No

(2) Who signed for transporter? Name Various Individuals Title Driver

- c. Does generator retain one copy of manifest signed by generator and transporter?

☒ Yes ☐ No

- d. Do returned copies of manifest include facility owner/operator signature and date of acceptance?

☒ Yes ☐ No

- e. If copy of manifest from facility was not returned within 45 days, did generator file an exception report? (262.42 - Exception reporting) None

☐ Yes N/A ☐ No

- (1) If yes, did it contain the following information:
 Legible copy of manifest.

☐ Yes ☐ No

AND

Cover letter explaining generators efforts to locate waste.

☐ Yes ☐ No

- f. Does (will) generator retain copies for 3 years?

☒ Yes ☐ No

Site Name: Cedar Chemical
 I.D. Number: ARD99066049
8-16-96

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Section D - Pre-Transport Requirements

1. Does generator package waste? ☒ Yes ☐ No

If no, skip to question 9.

If yes, complete the following questions.

Inspect containers ready for immediate shipment. If there are no such containers, skip to question 8.

None Ready for immediate shipment

2. Does generator package waste in accordance with 49 CFR 173 178, and 179? (DOT requirements) (262.30 - Packaging) ☐ Yes N/A ☐ No

3. Are containers to be shipped leaking or corroding or bulging? ☐ Yes ☐ No

Use narrative explanations sheet to describe containers and condition.

4. Does the generator use DOT labeling requirements in accordance with 49 CFR 172 when containers are offered for shipment? (262.31 - Labeling) ☐ Yes ☐ No

5. Does the generator mark each package in accordance with 49 CFR 172 when containers are offered for shipment? (262.32 - Marking) ☐ Yes ☐ No

6. a. Is each container of 110 gallons or less marked with the following label when containers are offered for shipment? ☐ Yes ☐ No

Label saying: HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

Generator's Name and Address N/A

Manifest Document Number N/A

- b. If other labels exist, list in narrative. N/A

7. If there are any vehicles present on-site loading or unloading hazardous waste, inspect for presence of placards. Note this instance on narrative explanation sheet. *None present*

8. Satellite Accumulation (effective June 20, 1985)

- a. Does the generator accumulate waste in containers at or near "satellite" generation points? ☒ Yes ☐ No

If no, skip to question 9.

If yes, complete the following.

Site Name: Cedar Chemical
 I.D. Number: ARD 990660649
 2-16-90

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- b. Are containers in good condition? ☒ Yes ☐ No
- c. Is the waste compatible with the containers? ☒ Yes ☐ No
- d. Is waste transferred from leaking containers or otherwise managed to control leakage? ☒ Yes ☐ No
- e. Are containers closed? ☒ Yes ☐ No
- f. Are containers marked with the words "hazardous waste" or identification of the contents? ☒ Yes ☐ No
- g. Has waste accumulation exceeded one (1) quart of acutely hazardous waste (261.33 e.) or 55 gallons of other hazardous waste? ☐ Yes ☒ No

If yes,

1. Has the container holding the excess amount been marked with the date the excess began accumulating? ☐ Yes ☒ No
2. Have excess amounts remained in the satellite accumulation area longer than three (3) days? ☐ Yes ☒ No

9. Accumulation Time (262.34 - Accumulation Time)

- a. Is the site a permitted/interim status storage facility? ☐ Yes ☒ No

If yes, skip to Section E, and complete and attach the TSD checklist and appropriate supplemental checklists. If no, answer rest of question #9.

- b. Is hazardous waste shipped offsite within 90 days? ☒ Yes ☐ No
- c. Is waste stored in containers or tanks? ☒ Yes ☐ No
- d. Is the beginning date of accumulation time clearly indicated on each container? ☒ Yes ☐ No
- e. Is each container or tank marked with the words "Hazardous Waste"? ☒ Yes ☐ No
- f. Complete and attach the containers/tanks supplemental checklists as appropriate.
- g. If generator accumulates waste on-site for less than 90 days, complete RCRA Generators Checklist Supplement.

Site Name: Cedar Chemical
 I.D. Number: ARD 990660649
7-16-90

Section E - Recordkeeping and Reporting

1. Is generator keeping the following reports for a minimum of three (3) years? (262.40 - Recordkeeping)
 - a. Manifests and signed copies from designated facilities? ☒ Yes ☐ No
 - b. Biennial reports (or reports as required by state agencies) ☒ Yes ☐ No
 - c. Exception Reports None ☐ Yes ☒ N/A ☐ No
 - d. Test results, where applicable. ☒ Yes ☐ No
2. Where are records kept (at facility or elsewhere)? Facility
3. Who is in charge of keeping the records? Name Joe Porter Title Environmental Engineer

Section F - Special Condition

1. Has generator received from or transported to a foreign source any hazardous waste? (262.50 - International Shipments) ☐ Yes ☒ No

If yes,

- a. Has a note been filed with the R.A.? ☐ Yes ☒ N/A ☐ No
- b. Is this waste manifested and signed by Foreign Consignee? ☐ Yes ☐ No
- c. If generator transported wastes out of the country has he received confirmation of delivered shipment? ☐ Yes ☐ No
- d. Has the generator filed an annual report (by March 1 of each year) giving the type, quantity, frequency and destination of all exported hazardous waste? (Per HSWA 1984) ☐ Yes ☐ No

Cedar Chemical Corp.
ARD990660649
February 16, 1990

GENERATOR NARRATIVE ATTACHMENT

Section B - Hazardous Waste Determination

- 2.a. D001 - Permethrin Wastewater - 315,133 pounds per month to Empak, Inc., Deer Park, TX.
D001 - Permethrin Wastewater - 11,143 pounds per month to Gibraltar Chemical, Winona, TX
D001 - Cypermethrin Wastewater - 1,110,783 pounds per month to Empak, Inc., Deer Park, TX
D001 - Cypermethrin Wastewater - 96,317 pounds per month to Gibraltar Chemical, Winona, TX
D007 - Waste calcium chloride solution containing chromium inhibitor - 13,323 pounds per month to Rollins Environmental, Plaquemine, LA

All monthly generation rates are based off 12 month generation and do not actually represent monthly generation rate. Calcium chloride was a one-time waste created when Cedar changed refrigeration system out.

3.b. Biological treatment system treats approximately 45,833 gallons per month averaged over a 12 month period. Elementary neutralization of propionic acid with anhydrous ammonia and surface drainage are the sources of water.

4. Cedar Chemical reclaims or reformulates some off-spec products on-site. At the time of the inspection there were 126 drums of Propanil and 82 drums of Permethrin/Cypermethrin in storage. The products were manufactured for sale in a foreign country, according to Joe porter, and are not a sellable product in the U.S. but are not considered waste by Cedar. These off-spec products are stored in drums prior to reformulation and are segregated from the hazardous waste drum storage area. These off-spec chemical products are exempt from RCRA regulations as far as I can tell. I was concerned about the condition of some of the containers. I observed open drums and damaged drums of off-spec product. These drums were on a concrete pad but were not protected from the weather and could ultimately result in a release to the environment considering the condition of the drums.

RCRA GENERATORS CHECKLIST

SUPPLEMENT

Site Name: Cedar Chemical
I.D. no.: ARD990660649
2-16-90

Personnel Training

1. Have facility personnel successfully completed a program of classroom or on-the-job training? ☒ Yes ☐ No
- a. Does the training program include instructions in the following:
- (1) procedures for using, inspecting, repairing and replacing facility emergency and monitoring equipment ☒ Yes ☐ No
- (2) key parameters for automatic waste feed cut-off systems ☒ Yes ☐ No
- (3) operation of communication or alarm systems ☒ Yes ☐ No
- (4) response to fires, explosions and groundwater contamination incidents ☒ Yes ☐ No
- (5) shutdown of operations ☒ Yes ☐ No
- (6) general hazardous waste management procedures ☒ Yes ☐ No
- b. Is the program directed by a person trained in hazardous waste management procedures? ☒ Yes ☐ No
- c. Have personnel completed annual training reviews? ☒ Yes ☐ No
- d. Does the owner/operator maintain the following documents:
- (1) job title, job description and name of employee for each position at the facility related to hazardous waste management ☒ Yes ☐ No
- (2) written description of the type and amount of both introductory and continuing training ☒ Yes ☐ No
- (3) written documentation that the training has been completed by facility personnel ☒ Yes ☐ No

Preparedness and Prevention

1. Is there evidence of fire, explosion or contamination of the environment? (265.31 - Maintenance and operation of facility) ☒ Yes ☐ No

If yes, use narrative explanations sheet to explain.

See RCRA Generator Supplement Narrative

2. Is the facility equipped with (265.32 - Required equipment)

- a. Internal communications or alarm system
 1. Is it easily accessible in case of emergency? ☒ Yes ☐ No
- b. Telephone or two-way radio to call emergency response personnel ☒ Yes ☐ No
- c. Portable fire extinguishers, fire control equipment spill control equipment and decontamination equipment ☒ Yes ☐ No
 1. Is this equipment tested to assure its proper operation? ☒ Yes ☐ No
- d. Water of adequate volume for hoses, sprinklers or water spray system ☒ Yes ☐ No
 1. Describe source of water Helena and West Helena
 2. Indicate flow rate and/or pressure and storage capacity, if available. DK

3. Is there sufficient aisle space to allow unobstructed movement of personnel and emergency equipment? (265.35- Required Aisle Space) ☒ Yes ☐ No
4. Has the owner/operator made arrangements with the local authorities to familiarize them with characteristics of the facility? (layout of facility, properties of hazardous waste handled and associated hazards, places where facility personnel would normally be working, entrances to roads inside facility, possible evacuation routes.) (265.37 - Arrangements with local authorities) ☒ Yes ☐ No

If no, has the owner/operator attempted to make such arrangements?

☐ Yes ☒ No

5. In the case that more than one police or fire department might respond, is there a designated primary authority? (265.37 - Arrangements with local authorities) ☒ Yes ☐ No

If yes, indicate primary authority West Helena

- a. Is the fire department a city or volunteer fire department? City

6. Does the owner/operator have phone numbers of and agreements with State emergency response teams, emergency response contractors and equipment suppliers? ☒ Yes ☐ No

Are they readily available to the emergency coordinator? (265.37 - Arrangements with local authorities)

☒ Yes ☐ No

Site Name: Cedar Chemical
 I.D. No.: ARD990660649
2-16-90

7. Has the owner/operator arranged to familiarize local hospitals with the properties of hazardous waste handled and types of injuries that could result from fires, explosions, or releases at the facility? If no, has the owner/operator attempted to do this? (265.37 - Arrangements with local authorities)

☒ Yes ☐ No
☐ Yes N/A ☐ No

8. If the State, or local authorities decline to enter into the above referenced agreements, has this situation been entered in the operating record? (265.37 - Arrangements with local authorities)

☐ Yes N/A ☐ No

Contingency Plan and Emergency Procedures

1. Does the facility have a contingency plan? (265.52 Content of Contingency Plan)

☒ Yes ☐ No

a. If yes, does it contain:

1. actions to be taken in response to emergencies ☒ Yes ☐ No
2. description of arrangements with police, fire and hospital officials ☒ Yes ☐ No
3. list of names, addresses, phone numbers of persons qualified to act as emergency coordinator ☒ Yes ☐ No
4. list, including the location and physical description of all emergency equipment ☒ Yes ☐ No
5. evacuation plan for facility personnel including signals, primary and alternate routes ☒ Yes ☐ No

2. Is a copy of the contingency plan maintained at the facility? (265.53 - copies of contingency plan)

☒ Yes ☐ No

3. Has a copy been supplied local police, fire depts., and hospitals? (265.53 - Copies of contingency plan)

☒ Yes ☐ No

4. Has the contingency plan been updated and amended as necessary?

☒ Yes ☐ No

5. Is the plan a revised SPCC Plan? (265.52 - content of contingency plan)

☒ Yes ☐ No

6. Is there an emergency coordinator on-site or within short driving distance of the plant at all times?

☒ Yes ☐ No

If yes, list primary emergency coordinator:

See Ported

Cedar Chemical Corp.
ARD990660649
February 16, 1990

RCRA GENERATOR SUPPLEMENT NARRATIVE

Preparedness and Prevention

There is evidence of an explosion and contamination of the environment on the site. The BSC unit blew up on September 25, 1989, requiring implementation of the contingency plan. ADPC&E investigated the site and Cedar filed a report with this department. A copy of this report is on file.

There are several areas around the plant property which have yellow stained soil. According to Joe Porter, the yellow stains are from previous owners, Ansel Corporation, burying Dinoseb on the site. On particular area is in the vicinity of the warehouse where, according to information I have read, approximately 250 drums are encapsulated in clay and covered by the concrete foundation. I have not been able to obtain information concerning the contents or the exact number of drums.

There are three pre-RCRA surface impoundments which were closed in 1978. It is apparent that the impoundments are contaminated due to the lack of vegetation covering them and the results of the soil borings in the attached report form EPA.

Groundwater contamination has been detected and verified both by Cedar Chemical's lab and by samples split with ADPC&E. Groundwater samples were split on the day of this CEI. Purged water was discharged directly onto the ground and was found to be contaminated after lab analysis, further contributing to on-site contamination.

A drum disposal site was unearthed during construction of a drainage ditch. Eight drums were dug up and, according to information I received, contained Dinoseb (P020). Cedar anticipates more drums being buried in this area and has submitted a plan to remove the drums and possibly locate other buried drums in an area they plan to expand the plant.

Site Name: Cedar Chemical
 I.D. Number: ARD99066049

2-16-90

CONTAINERS STORAGE CHECKLIST
 (Subpart I - Use and Management of Containers 265.170)

1. Does the facility store hazardous waste in containers?

☒ Yes ☐ No

If no, do not complete this form.

2. Are the containers in good condition?
 (check for leaks, corrosion, bulges, etc.)

☐ Yes N/A ☐ No

No containers in storage.

If no, explain in narrative and document with photograph.

3. If a container is found to be leaking, does the operator transfer the hazardous waste from the leaking container?

☒ Yes ☐ No

4. Is the waste compatible with the containers and/or its liner?

☒ Yes ☐ No

If no, explain in narrative.

5. Are the stored containers closed?

☐ Yes N/A ☐ No

No containers in storage.

If no, explain in narrative.

6. Are containers holding hazardous waste opened, handled or stored in such a manner as to cause the container to rupture or leak?

☐ Yes ☒ No

If yes, explain in narrative.

7. Are each of the containers inspected at least weekly?

☒ Yes ☐ No

If no, explain in the narrative the frequency of inspection.

8. Are containers holding ignitable or reactive wastes located at least 15 meters (50 feet) from the facility property line?

☒ Yes ☐ No

If no, explain in narrative and document with photograph.

9. Are incompatible wastes stored in the same containers?

☐ Yes N/A ☐ No

No incompatibles.

If yes, explain in narrative.

10. Are containers holding incompatible wastes kept apart by physical barrier or sufficient distance?

☐ Yes N/A ☐ No

No incompatibles.

If no, explain in narrative.

Revised: February, 1987

Site Name: Cedar Chemical
ID Number ARD 990660649
2-16-90

GROUND WATER MONITORING CHECKLIST

Note: Checklist used for guidance only.

1. GROUND WATER MONITORING STATUS:

Note: Ground water monitoring installed as required by CAD LIS 86-027

Complete the table for each Waste Management Area (WMA):

Note: There are no interim status or permitted RCRA units.

WMA	Description of Units in WMA	Activity Status DH 2-16-90	Monitoring Status	Number of Wells
1	Cedar Chemical Physical Plant	Generator	Detection	1 U 8 D
2				U D
3				U D
4				U D
Total of MW's @ Facility				<u>9</u>

a. Provide diagram showing locations of each monitoring well around each WMA and indicate date of installation of each well.

2. Has the facility installed at least one background monitoring well for each WMA? Yes No ✓

If No, explain in narrative

See Narrative

3. If yes, does the background well(s) appear to be located hydraulically upgradient of the WMA? Yes DH 2-16-90 No N/A

If No, explain in narrative.

See Narrative

4. Has the facility installed at least three hazardous waste detection monitoring wells for each WMA? Yes No ✓

If No, explain in narrative.

See Narrative

5. If yes, do the detection wells appear to be located hydraulically downgradient of the WMA? Yes No N/A

If No, explain in narrative.

See Narrative

6. Does the facility have a GW Sampling and Analysis Plan? Yes ✓ No
If Yes, Does it include? DH 2-16-90

a. Sample collection procedures

Yes ✓ No

b. Sample preservation and shipment

Yes ✓ No

c. Analytical procedures

Yes ✓ No

d. Chain of Custody procedures

Yes ✓ No

e. QA/QC procedures

Yes ✓ No

7. Does the facility have GW Quality Assessment Plan Outline? Yes No ✓

See Narrative

Site Name : Cedar Chemical
 I.D. Number: ARD 990660649
7-16-90

8. Has the facility been granted an alternate groundwater monitoring plan or partial waiver? See Narrative Yes ☐ No ☒
- a. If yes, is an approved sampling and analysis plan followed? Yes ☐ No N/A
- b. If yes, give date of approval N/A
9. Does the facility keep records of the following?
- a. Analyses for ground water parameters? Yes ☒ No ☐
- b. Calculations of means and variances? Yes ☒ No ☐
- c. Water surface elevations taken at each well sampling event? Yes ☒ No ☐
- d. Analyses of duplicate samples for contamination confirmation? Yes ☒ No ☐
- e. Analyses of samples taken as a result of implementing the Ground Water Quality Assessment Plan? See Narrative Yes ☐ No N/A
- f. Results of Ground Water Quality Assessment Plan?
 (1) Rates of Migration? See Narrative Yes ☐ No N/A
 (2) Concentration of hazardous waste and/or constituents thereof? See Narrative Yes ☐ No N/A
 (3) Analyses of quarterly ground water sampling? Yes ☐ No N/A
- g. Copies of annual reports of the groundwater monitoring program? See Narrative Yes ☒ No ☐
7. Complete the remaining checklists as applicable to each Waste Management Area. Indicate which checklists are completed.
- ☒ First Year Background Sampling
☐ Semi-Annual Detection Monitoring
☐ GW Assessment Monitoring

Comments: See Narrative

Note: Cedar Chemical Corporation is a generator only. There are no regulated units with ground water monitoring. All units are pre-RCRA or not RCRA units. Groundwater monitoring was required by CAO LIS 86-027 to determine if past operations contaminated ground water. Contamination has been detected and future plans are expected.

Site Name: Cedar Chemical
 ID Number: ARD 990660649
7-16-90

FIRST YEAR BACKGROUND SAMPLING

(Complete only for those facilities presently doing background sampling)

Waste Management Area(s) Cedar Chemical Physical Plant

1. Are all samples analyzed for:

EPA Drinking Water Standards? See Narrative
 Ground water quality parameters? See Narrative
 Contamination indicator parameters?

Yes	<u> </u>	No	<u>✓</u>
Yes	<u> </u>	No	<u>✓</u>
Yes	<u>✓</u>	No	<u> </u>

2. Are 4 replicate measurements of contamination indicator parameters made for each well sample?

Yes	<u>✓</u>	No	<u> </u>
-----	----------	----	---------------

3. Are ground water surface elevations determined at each well sampling event?

Yes	<u>✓</u>	No	<u> </u>
-----	----------	----	---------------

4. Briefly explain why facility is performing first year sampling at this time:

See Groundwater Monitoring Narrative

Note: Cedar Chemical Corporation is a generator only. There are no regulated units with groundwater monitoring. All units are pre-RCRA or not RCRA units. Ground water monitoring was required by CAO LIS 86-027 to determine if past operations contaminated ground water. Contamination has been detected and future plans are expected.

Site Name: Cedar Chemical
 ID Number ARD 990660649
2-16-90

GW SEMI-ANNUAL DETECTION MONITORING

(To be completed for those facilities that have completed the first year of background sampling)

Waste Management Area(s) _____ N/A

- | | | | |
|--|-----------|----------|--|
| 1. Was the first year background sampling program completed? | Yes _____ | No _____ | |
| 2. Are wells sampled and analyzed annually for ground water quality parameters? | Yes _____ | No _____ | |
| 3. a. Are wells sampled and analyzed semi-annually for contamination indicator parameters? | Yes _____ | No _____ | |
| b. Are 4 replicate measurements of indicator parameters made for each upgradient and downgradient well sample? | Yes _____ | No _____ | |
| 4. Are ground water surface elevations determined at each well for each sampling event? | Yes _____ | No _____ | |
| 5. Were ground water surface elevations evaluated <u>annually</u> to determine whether monitoring wells are properly placed? | Yes _____ | No _____ | |
| a. If no, explain | | | |
| | | | |
| 6. Are statistical comparisons, using the Student t-test at the 0.01 level of significance, performed? | Yes _____ | No _____ | |
| a. If no, explain | | | |
| | | | |
| 7. Did the statistical comparisons show a significant increase (or pH decrease) of indicator parameters in the upgradient well(s)? | Yes _____ | No _____ | |
| a. If yes, did (will) the facility submit this information in the annual ground water monitoring report? | Yes _____ | No _____ | |

Site Name: Coda Chemical
I.D. Number: ARD 990660649
2-16-90

- | | | | |
|-----|---|-----------|---------------|
| 8. | Did the statistical comparisons show a significant increase (or pH decrease) of indicator parameters in the downgradient wells? | Yes _____ | No <u>N/A</u> |
| 9. | If significant increases (or pH decreases) in downgradient wells were detected, did the company: | | |
| a. | Resample the "affected" well(s), split the sample in two, and re-analyze for the parameter(s) that showed significant difference? | Yes _____ | No _____ |
| b. | Confirm the significant difference? | Yes _____ | No _____ |
| c. | Notify the Director within 7 days of confirmation? | Yes _____ | No _____ |
| d. | Submit a certified Ground Water Quality Assessment Plan within 15 days of notifying the Director? | Yes _____ | No _____ |
| 10. | Has the facility substituted other indicator parameters in place of pH, conductivity, TOC and/or TOX? | Yes _____ | No _____ |
| | b. List the parameters: _____ | | |
| | c. Date of approval _____ | | |

[illegible]

Site Name: Cedar Chemical
 ID Number: ARD 990660649
7-16-90

GW ASSESSMENT MONITORING

(To be completed for those facilities that have entered Assessment Phase of Monitoring)

Waste Management Area(s) N/A

1. Has the facility started to implement an approved Ground Water Quality Assessment Plan? Yes ☐ No ☐
 Give date plan was started _____.
2. If the plan is in progress, give projected completion date _____ and describe actions to date: _____
- a. Is the facility on schedule? Yes ☐ No ☐
3. If the plan has been completed, give date of Ground Water Quality Assessment report: _____
4. Do results indicate that hazardous waste or constituents have been detected? Yes ☐ No ☐
 - a. If yes, has an Assessment Monitoring Program been implemented? Yes ☐ No ☐
 - b. If no, was detection monitoring reinstated? Yes ☐ No ☐
 - c. If the facility has not responded appropriately, explain why in comments.

Note: If answer to 4b is yes, Stop Here.

5. List the hazardous waste constituents detected: _____
6. Has the facility Sampling and Analysis Plan been revised to include these parameters? Yes ☐ No ☐
7. Quarterly, since completion of assessment, has the facility continued to:
 - a. Sample and analyze for hazardous waste or constituents? Yes ☐ No ☐
 - b. Determine rate and extent of migration of hazardous waste or constituents? Yes ☐ No ☐

Site Name: Cedar Chemical
I.D. Number: ARD990660649
2-16-90

8. Yearly, has the facility reported the results of the assessment program (with annual waste report), to include the calculated (or measured) flow rate in ground water during the reporting period? Yes _____ No N/A
9. Has the assessment detected hazardous waste or constituents in ground water at this regulated unit? Yes _____ No _____
- a. If yes has the facility sampled and analyzed for all hazardous waste constituents (Appendix VIII, 40 CFR 261) to characterize the plume in accordance with 40 CFR 270.14(c)(4)? Yes _____ No _____

Comments: _____

Note: This ground water monitoring checklist is designed for site verification during routine CEI inspections and is not intended to be used to evaluate the technical aspects of a ground water monitoring program. All technical evaluations will be found in the Compliance Monitoring Evaluation report.

Cedar Chemical Corp.
ARD990660649
February 16, 1990

GROUNDWATER MONITORING NARRATIVE

Cedar Chemical Corporation installed an approved groundwater monitoring system as part of CAO LIS 86-027. The CAO required that Cedar submit a hydrogeologic investigation plan for approval, conduct a hydrogeologic investigation (after approval of the plan) and submit results of that investigation and implement a groundwater monitoring plan as a result of that investigation. The groundwater monitoring plan has been implemented and sampling has been done on an accelerated sampling plan. They are currently in the last round of sampling and will do the last round sampling in April, 1990. A final report on the findings is due shortly after sampling is completed. It should be noted that Cedar Chemical is not operating RCRA waste management units and, therefore, is not under a permit or interim status at this time. There are three pre-RCRA surface impoundments on-site which are closed and have been found to have contaminated soils.

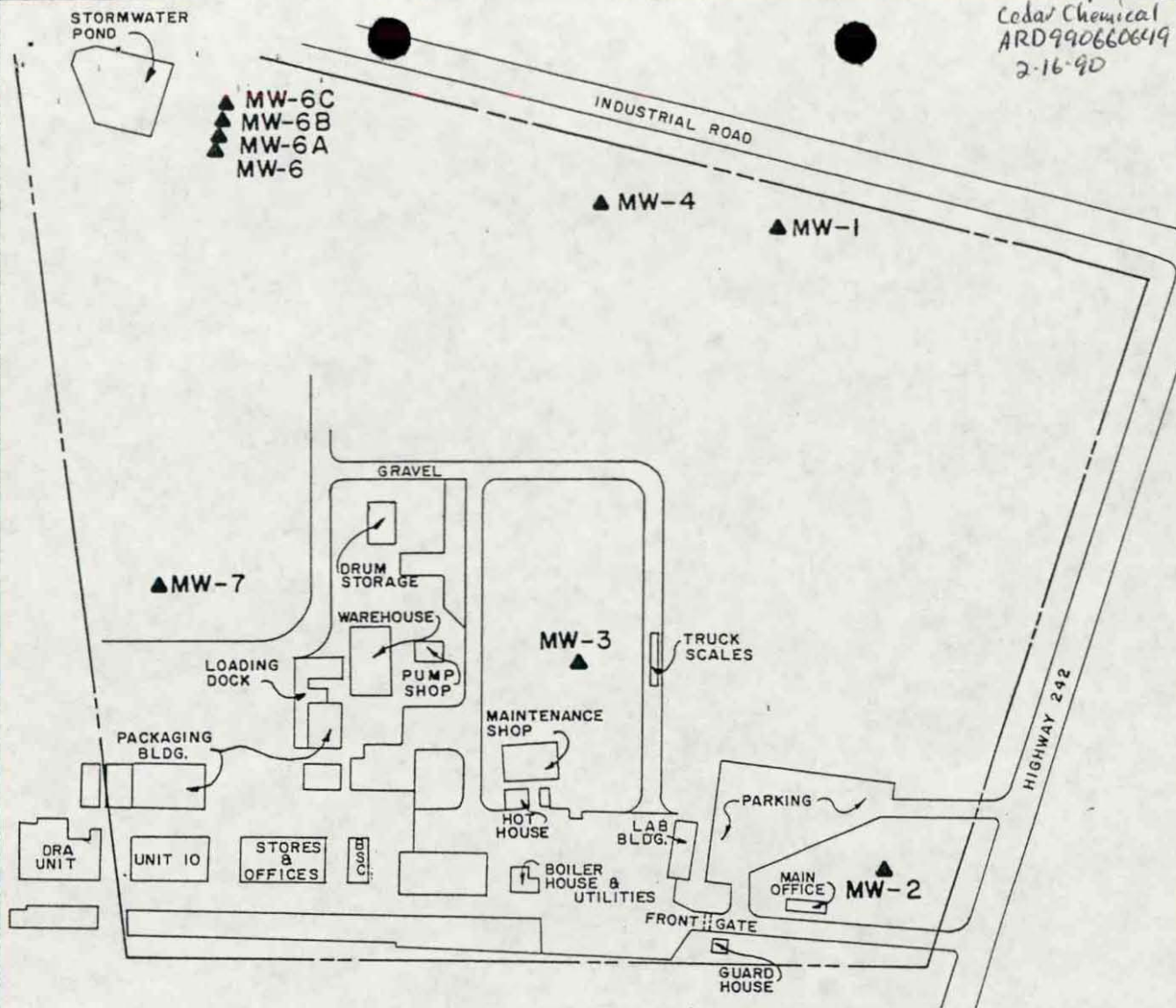
The Groundwater Monitoring Checklist used in this report is applicable to interim status monitoring and is only used for guidance purposes. Much of the checklist is not applicable because there are no RCRA regulated waste management units. The monitoring system was installed to assess whether or not this facility has impacted groundwater quality and not to determine the impact of each individual waste unit. Wells are not installed at the individual closed units so questions 2 - 5 are not applicable to this situation.

A Groundwater Sampling and Analysis Plan was included in the Groundwater Monitoring Plan. A Groundwater Quality Assessment Plan Outline was not included in the CAO so questions on the checklist about implementation of the GWQAP are not applicable. Since contamination has been detected additional work is expected.

Monitoring wells were being sampled on the day of the inspection. I observed the wells purged directly onto the ground. Laboratory analysis confirmed the water to be contaminated on this day. See attached memo from Jay Justice to Mark Simpson, attached photos and Introductory Narrative for the violation.

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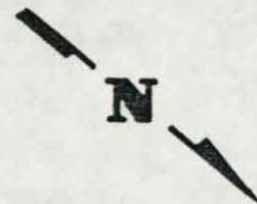
Cedar Chemical
ARD990660649
2-16-90



MONITOR WELL LOCATIONS

CEDAR CHEMICAL COMPANY
WEST HELENA, ARKANSAS

SCALE
1" = 170'



ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO : David Hartley, Geologist II, Groundwater Sec., H.W.
FROM : Jay Justice, Hazardous Waste Chemist, T.S. JJ
DATE : 10-APR-1990
SUBJECT : Results taken from analyses performed on samples
taken from monitoring wells located at Cedar Chemical
Company on February 16, 1990

The samples taken from monitoring wells located at Cedar Chemical Company on February 16, 1990, have been analyzed for TOC and semivolatile organics. The results from these analyses are listed below and are expressed in mg/l.

MW 1

TOC	5.8
1,2-Dichlorobenzene	0.04

MW 2

TOC	2.2
Semivolatile organics	<0.04

MW 3

TOC	21
1,2-Dichlorobenzene	0.28
Dichloroanilines (1)	0.13-0.25
Propanil (1)	0.04-0.09

MW 4

TOC	11
Bromacil (1) (2)	0.04-0.07

MW 6

TOC	18
Semivolatile organics	<0.04

NW 6A

TOC
Semivolatile organics

2.1
<0.04

MW 6B

TOC
1,2-Dichlorobenzene
Chloroanilines (1)
Dichloroanilines (1)
Bromacil (1) (2)

77
0.06
0.32-0.63
14-28
0.07-0.13

MW 6C

TOC
Chloroanilines (1)
Dichloroanilines (1)
Propanil (1)
Bromacil (1) (2)

73
0.16-0.31
13-25
0.15-0.3
0.04-0.09

MW 7

TOC
Substituted monochlorinated Benzotriazoles (1) (2)

10
0.08-0.17

Field Duplicate
(MW 6)

TOC
Semivolatile organics

NA(3)
<0.04

Spike
(Percent Recovery)

Phenol	54
2-Chlorophenol	74
1,4-Dichlorobenzene	59
N-Nitroso-di-n-propylamine	37
1,2,4-Trichlorobenzene	60
4-Chloro-3-methylphenol	71
Acenaphthene	86
Pentachlorophenol	81
Pyrene	96

- (1) This value is an estimate
(2) Tentatively identified; not confirmed with a standard
(3) Not analyzed for this parameter

REF
#14 NF
DEC 11 1989
REGULATORY

p-8408110
Cedar Chemical
ARD990660649
2-16-90

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO : Mark Simpson, Geologist, R.S.T. Div. JJ
FROM : Jay Justice, Hazardous Waste Chemist, T.S. Div.
DATE : 7-DEC-1989
SUBJECT : Results from analysis on groundwater samples taken
at Cedar Chemical Company on October, 17, 1989.

The groundwater samples taken October 17, 1989, at Cedar Chemical Company located at West Helena have been analyzed for Semivolatile Organics and Total Organic Carbon. The results from these analyses are listed below and are expressed in mg/l.

Well #3

TOC	41
Methoxybenzene (1)	0.02
Dichlorobenzene (1)	0.15
Propanil (1)	0.17

Well #6C

TOC	67
Dichloroanilines (1)	25
Chloroaniline (1)	0.1

Well #6A

TOC	1.5
Phenylaniline (1)	0.025

Field Duplicate
(Well #6C)

TOC	71
Dichloroanilines (1)	25

(1) Denotes a concentration that has been estimated.

cc: Jim Rigg, Geologist II, Groundwater Section
Hazardous Waste Division

04-23-90 09:06 AM FROM CED. CHEMICAL CORP



CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS



SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES

8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 582-8139



P04/04

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Cedar Chemical
ARD 990660649
2-16-90



REPORT OF LABORATORY ANALYSIS

Date of Report: MARCH 5, 1990

Date Received: FEBRUARY 21, 1990

For CEDAR CHEMICAL CORPORATION P.O. BOX 2749 WEST HELENA AR 72390

Job CEDAR CHEMICAL CORPORATION - TOC & TOH ANALYSIS - MONITORING WELLS

Sample From AS LISTED BELOW

TRANSPORTED BY SORRELLS RESEARCH.

LABORATORY NO.	SAMPLE I.D.	DATE/TIME	TOH UG/L	TOC MG/L
E835.001	MW 1	02-16-90	648	5.72 +- .06
E835.002	MW 2	02-16-90	20	2.74 +- .1
E835.003	MW 3	02-16-90	4370	24.97 +- .3
	MW 3 FIELD REPLICATE		3360	24.44 +-2.1
E835.004	MW 4	02-16-90	1970	12.63 +- .05
E835.005	MW 6	02-16-90	53	22.8 +- .5
E835.006	MW 6A	02-16-90	62	2.81 +- .06
E835.007	MW 6B	02-16-90	44000	19.99 +- .1
E835.008	MW 6C	02-16-90	12200	101.8 +- .52
E835.009	MW 7	02-16-90	3500	14.03 +- .1
E835.010	FIELD BLANK	02-16-90	22	2.24 +- .04

ANALYSIS BY: K. E. SORRELLS/CECIL SORRELLS
COLLECTED BY DFK FEB 90 / TRANSPORTED BY KEVIN HALL FEB 2

Remarks: SAMPLE PRESERVATION AND LABORATORY ANALYSIS CONDUCTED ACCORDING TO EPA 40 CFR 136. *TEST/ANALYSIS/TIME/COEFF. VAR. *
QA PLAN FILED WITH A. D. P. C. & E. INCLUDES 10 % REPLICATION & 10% RECOVERY STUDIES BY RANDOM SELECTION. CALIB. RECORDS
MAINTAINED.
TDC/CAS/03-01/* TOH/KES/02-22-90/S.D. 13%

Copies to 2-ABOVE; ATTN: MR. JOE PORTER

Laboratory No.

E385.001 - .010 CEDAR LSH

REVIEWED BY

04-23-90 09:06 AM FROM CEDAR CHEMICAL CORP

P03/04
p. 86 of 110
Cedar Chemical
ARD 990660649
2-16-90**SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES****WPCF****CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS****8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209****(501) 562-8139****LABORATORY ANALYSIS****REPORT OF****Date of Report: DECEMBER 21, 1989
Date Received: DECEMBER 13, 1989****For CEDAR CHEMICAL CORPORATION P.O. BOX 2749 WEST HELENA AR 72390****Job CEDAR CHEMICAL CORPORATION - TOC & TOH ANALYSIS ON MONITORING WELLS****Sample From AS LISTED BELOW
TRANSPORTED BY SORRELLS RESEARCH.**

LABORATORY NO.	SAMPLE I.D.	DATE/TIME	TOH UG/L	TDC MG/L
E492.001	MW 1	12-11-89	657	4.964 ± .03
E492.002	MW 2	12-11-89	65.5 ± 1.2	1.74 ± .01
	FIELD REPLICATES	12-11-89	77.0	3.1 ± .02
E492.003	MW 3	12-11-89	4970	26.2 ± .3
E492.004	MW 4	12-11-89	1780	9.72 ± .1
E492.005	MW 6	12-11-89	273	19.34 ± .2
E492.006	MW 6A	12-11-89	35.3	2.37 ± .09
E492.007	MW 6B	12-11-89	31500	84.7 ± .6
E492.008	MW 6C	12-11-89	44800	74.8 ± .9
E492.009	MW 7	12-11-89	979	8.77 ± .09
E492.010	FIELD BLANK	12-11-89	29	.664 ± .02
E492.011	B103191, B103192	12-11-89	< 3	.323 ± .03
E492.012	B103194	12-11-89	—	.25 ± .02

ANALYSIS BY: K. E. SORRELLS/CECIL SORRELLS**Remarks**SAMPLE PRESERVATION AND LABORATORY ANALYSIS CONDUCTED ACCORDING TO EPA 40 CFR 136. TEST/ANALYSIS/TIME/COEFF. VAR. & QA PLAN FILED WITH A. D. P. C. & E. INCLUDES 10 % REPLICATION & 10% RECOVERY STUDIES BY RANDOM SELECTION. CALIB. RECORDS MAINTAINED.
TDC/CAS/12-18(0900)/# TOH/KES/12-14-89/S.D. 8% S.R. 106.1 %**Copies to**

2-ABOVE; ATTN: MR. JOE PORTER

Laboratory No. E492.001 - .014 CFDA DKS REVIEWED BY*K.E. Sorrells M.S.*

04-23-90 09:06 AM FROM CEDAR CHEMICAL CORP

P02/04
p-8708 110
Cedar Chemical
ARD 99060649
7-16-90**SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES****WPCF****CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS****8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209****(501) 582-8139****REPORT OF LABORATORY ANALYSIS**Date of Report: **NOVEMBER 20, 1989**Date Received: **OCTOBER 18, 1989**For **CEDAR CHEMICAL CORPORATION P.O. BOX 2749 WEST HELENA AR 72390**Job **CEDAR CHEMICAL CORPORATION - TOC & TOH ANALYSIS ON MONITORING WELLS**Sample From **AS LISTED BELOW**
TRANSPORTED BY SORRELLS RESEARCH.

LABORATORY NO.	SAMPLE I.D.	DATE/TIME	TOH UG/L	TOC MG/L
E202.001	MW 1	10-17-89	783	4.59
	FIELD REPLICATES	10-17-89	765	4.64
E202.002	MW 2	10-17-89	37.9	2.06 ± .06
E202.003	MW 3	10-17-89	6570	38.4 ± .3
E202.004	MW 4	10-17-89	1840	10.1 ± .05
E202.005	MW 6	10-17-89	81.8	3.64 ± .08
E202.006	MW 6A	10-17-89	201	2.31 ± .05
E202.007	MW 6B	10-17-89	39100	85.9 ± .5
E202.008	MW 6C	10-17-89	50800	78.7 ± 3.6
E202.009	MW 7	10-17-89	602	7.5 ± .07
E202.010	FIELD BLANK	10-17-89	23	1.23 ± .02

ANALYSIS BY: **K. E. SORRELLS/CECIL SORRELLS****Remarks**

SAMPLE PRESERVATION AND LABORATORY ANALYSIS CONDUCTED ACCORDING TO EPA 40 CFR 136. *TEST/ANALYSIS/TIME/COEFF. VAR. & QA PLAN FILED WITH A. D. P. C. & E. INCLUDES 10 % REPLICATION & 10% RECOVERY STUDIES BY RANDOM SELECTION. CALIB. RECORDS MAINTAINED.

TOC/CAS/10-24(0830)/.83%*TOH/KES/10-27(0900)/S.D. 12% S.R. 98.6%

Copies to

2-ABOVE; ATTN: MR. JOE PORTER

K. E. Sorrells

LAND DISPOSAL RESTRICTION CHECKLIST FOR FY 1989

Form A - Restricted Waste Determination

Note: This form must be completed during all RCRA Compliance Evaluation Inspections (CEIs). Additional forms (B through F) may be required depending on types of wastes generated or handled.

Section I. Wastes restricted on November 7, 1986 (F-solvents and Dioxins)

Check each box that applies (see Appendix A):

- | | | | |
|--|-------------------------------|-------------------------------|-------------------------------|
| <input type="checkbox"/> F001 | <input type="checkbox"/> F004 | <input type="checkbox"/> F021 | <input type="checkbox"/> F026 |
| <input type="checkbox"/> F002 | <input type="checkbox"/> F005 | <input type="checkbox"/> F022 | <input type="checkbox"/> F027 |
| <input type="checkbox"/> F003 ¹ | <input type="checkbox"/> F020 | <input type="checkbox"/> F023 | <input type="checkbox"/> F028 |

- ☒ None of the wastes listed above are handled by the generator.
Complete Section II of this form.
- ☐ One or more of the wastes listed above are handled by the generator.
Complete Form C - Manifesting Restricted Wastes and Form D - Testing and Management of F-solvents and Dioxins.

¹ Applicable only if waste is ignitable.

Section II. Wastes restricted on July 8, 1987 (California List)

Check each box that applies:

- ☐ Liquid hazardous wastes or liquids associated with solids or sludges containing free cyanides at concentration greater than 1000 mg/L.
- ☐ Liquid hazardous wastes or liquids associated with solids or sludges containing one or more of the following concentrations:
- ☐ Arsenic or compounds containing arsenic greater than 500 mg/L;
 - ☐ Cadmium or compounds containing cadmium greater than 100 mg/L;

Form A - Restricted Waste Determination (cont'd)

- ☐ Chromium or compounds containing chromium greater than 500 mg/L;
- ☐ Lead or compounds containing lead greater than 500 mg/L;
- ☐ Mercury or compounds containing mercury greater than 20 mg/L;
- ☒ Nickel or compounds containing nickel greater than 134 mg/L;
- ☐ Selenium or compounds containing selenium greater than 100 mg/L; or
- ☐ Thallium or compounds containing Thallium greater than 130 mg/L.

- ☒ Liquid hazardous wastes exhibiting a pH less than or equal to 2.0.
- ☐ Liquid hazardous wastes that also contain polychlorinated biphenols (PCBs) at concentrations between 50 to 500 mg/L.
- ☐ Liquid or nonliquid hazardous waste containing halogenated organic compounds at concentrations greater than or equal to 1000 mg/Kg.

- ☐ None of the wastes listed above are handled by the generator.
Complete Section III of this form.
- ☒ One or more of the wastes listed above are handled by the generator.
Complete Form C - Manifesting Restricted Wastes and Form E - Testing and Management of California List Wastes.

Section III. Wastes restricted on August 8, 1988 (First Third List)

1. Hard Hammer Wastes (see Appendix B)

B. All others

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> F006 ¹ | <input type="checkbox"/> K001 | <input type="checkbox"/> K004 ¹ | <input type="checkbox"/> K008 ¹ |
| <input type="checkbox"/> K015 | <input type="checkbox"/> K016 | <input type="checkbox"/> K018 | <input type="checkbox"/> K019 |
| <input type="checkbox"/> K020 | <input type="checkbox"/> K021 ¹ | <input type="checkbox"/> K022 ¹ | <input type="checkbox"/> K024 |
| <input type="checkbox"/> K025 ¹ | <input type="checkbox"/> K030 | <input type="checkbox"/> K036 ¹ | <input type="checkbox"/> K037 |

Form A - Restricted Waste Determination (cont'd)

<input type="checkbox"/> K044	<input type="checkbox"/> K045	<input type="checkbox"/> K046 ¹	<input type="checkbox"/> K047
<input type="checkbox"/> K048 ²	<input type="checkbox"/> K049 ²	<input type="checkbox"/> K050 ²	<input type="checkbox"/> K051 ²
<input type="checkbox"/> K052 ²	<input type="checkbox"/> K060 ¹	<input type="checkbox"/> K061 ¹	<input type="checkbox"/> K062
<input type="checkbox"/> K069 ¹	<input type="checkbox"/> K071	<input type="checkbox"/> K083 ¹	<input type="checkbox"/> K086 ³
<input type="checkbox"/> K087	<input type="checkbox"/> K099	<input type="checkbox"/> K100 ¹	<input type="checkbox"/> K101 ⁴
<input type="checkbox"/> K102 ⁴	<input type="checkbox"/> K103	<input type="checkbox"/> K104	

- ¹ Nonwastewaters only, wastewaters have been soft hammered.
² National Capacity Extension through May, 1990.
³ Solvent-wash subcategory, other subcategories have been soft hammered.
⁴ All wastewaters and nonwastewaters with less than 1% total As, high As wastewaters have been soft hammered.

2. Soft Hammer Wastes (see Appendix C)

A. Wastewaters only

<input type="checkbox"/> F006	<input type="checkbox"/> K004	<input type="checkbox"/> K008	<input type="checkbox"/> K021
<input type="checkbox"/> K022	<input type="checkbox"/> K025	<input type="checkbox"/> K036	<input type="checkbox"/> K046
<input type="checkbox"/> K060	<input type="checkbox"/> K061	<input type="checkbox"/> K069	<input type="checkbox"/> K083
<input type="checkbox"/> K086	<input type="checkbox"/> K100	<input type="checkbox"/> K101	<input type="checkbox"/> K102

B. All others

<input type="checkbox"/> F007	<input type="checkbox"/> F008	<input type="checkbox"/> F009	<input type="checkbox"/> F019
<input type="checkbox"/> K011	<input type="checkbox"/> K013	<input type="checkbox"/> K014	<input type="checkbox"/> K017
<input type="checkbox"/> K031	<input type="checkbox"/> K035	<input type="checkbox"/> K036	<input type="checkbox"/> K069
<input type="checkbox"/> K073	<input type="checkbox"/> K083	<input type="checkbox"/> K084	<input type="checkbox"/> K085
<input type="checkbox"/> K086	<input type="checkbox"/> K101 ¹	<input type="checkbox"/> K102 ¹	<input type="checkbox"/> K106

Facility Name: Cedar Chemical
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Form A - Restricted Waste Determination (cont'd)

<input type="checkbox"/> P001	<input type="checkbox"/> P004	<input type="checkbox"/> P005	<input type="checkbox"/> P010
<input type="checkbox"/> P011	<input type="checkbox"/> P012	<input type="checkbox"/> P015	<input type="checkbox"/> P016
<input type="checkbox"/> P018	<input type="checkbox"/> P020	<input type="checkbox"/> P030	<input type="checkbox"/> P036
<input type="checkbox"/> P037	<input type="checkbox"/> P039	<input type="checkbox"/> P041	<input type="checkbox"/> P048
<input type="checkbox"/> P050	<input type="checkbox"/> P058	<input type="checkbox"/> P059	<input type="checkbox"/> P063
<input type="checkbox"/> P068	<input type="checkbox"/> P069	<input type="checkbox"/> P070	<input type="checkbox"/> P071
<input type="checkbox"/> P081	<input type="checkbox"/> P082	<input type="checkbox"/> P084	<input type="checkbox"/> P087
<input type="checkbox"/> P089	<input type="checkbox"/> P092	<input type="checkbox"/> P094	<input type="checkbox"/> P097
<input type="checkbox"/> P102	<input type="checkbox"/> P105	<input type="checkbox"/> P108	<input type="checkbox"/> P110
<input type="checkbox"/> P115	<input type="checkbox"/> P120	<input type="checkbox"/> P122	<input type="checkbox"/> P123
<input type="checkbox"/> U007	<input type="checkbox"/> U009	<input type="checkbox"/> U010	<input type="checkbox"/> U012
<input type="checkbox"/> U016	<input type="checkbox"/> U018	<input type="checkbox"/> U019	<input type="checkbox"/> U022
<input type="checkbox"/> U029	<input type="checkbox"/> U031	<input type="checkbox"/> U036	<input type="checkbox"/> U037
<input type="checkbox"/> U041	<input type="checkbox"/> U043	<input type="checkbox"/> U044	<input type="checkbox"/> U046
<input type="checkbox"/> U050	<input type="checkbox"/> U051	<input type="checkbox"/> U053	<input type="checkbox"/> U061
<input type="checkbox"/> U063	<input type="checkbox"/> U064	<input type="checkbox"/> U066	<input type="checkbox"/> U067
<input type="checkbox"/> U074	<input type="checkbox"/> U077	<input type="checkbox"/> U078	<input type="checkbox"/> U086
<input type="checkbox"/> U089	<input type="checkbox"/> U103	<input type="checkbox"/> U105	<input type="checkbox"/> U108
<input type="checkbox"/> U115	<input type="checkbox"/> U122	<input type="checkbox"/> U124	<input type="checkbox"/> U129
<input type="checkbox"/> U130	<input type="checkbox"/> U133	<input type="checkbox"/> U134	<input type="checkbox"/> U137
<input type="checkbox"/> U151	<input type="checkbox"/> U154	<input type="checkbox"/> U155	<input type="checkbox"/> U157
<input type="checkbox"/> U158	<input type="checkbox"/> U159	<input type="checkbox"/> U171	<input type="checkbox"/> U177

LAND DISPOSAL RESTRICTION CHECKLIST FOR FY 1989

Form B - Treatment, Storage and Disposal

Note: This form should be completed only if the generator or handler stores restricted wastes onsite for greater than 90 days or operates RCRA-regulated treatment or disposal units. Small quantity generators who accumulate restricted wastes for less than 180(270) days are exempt from the following requirements.

Generator Only

N/A

Section I. General facility standards

- | | | |
|---|-----------------|----------------|
| 1. Has the facility's waste analysis plan been revised in accordance 264.13(b)(6) or 265.13(b)(6) to reflect requirements under 268.7 ? | <u> </u> Yes | <u> </u> No |
| 2. Has the facility obtained representative chemical and physical analysis of wastes and residues in accordance to 264.13 or 265.13 ? | <u> </u> Yes | <u> </u> No |
| if yes, | | |
| A. Chemical and physical analyses of F-solvents and Dioxins | | |
| i. Has testing included analyses for all F-solvent constituents ? | <u> </u> Yes | <u> </u> No |
| ii. Were all F-solvent constituents analyzed by employing the Toxicity Characteristic Leaching Procedure (TCLP) ? | <u> </u> Yes | <u> </u> No |
| B. Chemical and physical analyses of California List wastes | | |
| i. Were the following analyses conducted on California List wastes: | | |
| a. pH ? | <u> </u> Yes | <u> </u> No |
| b. Concentrations of PCBs ? | <u> </u> Yes | <u> </u> No |
| c. Concentration of Halogenated Organic Compounds ? | <u> </u> Yes | <u> </u> No |
| d. Heavy Metal concentration ? | <u> </u> Yes | <u> </u> No |
| e. Cyanide concentration ? | <u> </u> Yes | <u> </u> No |

Form B - Treatment, Storage and Disposal (cont'd)

C. Chemical and physical analyses of First Third List Wastes

- i. Has the facility tested wastes with established treatment standards (hard hammer wastes) ?

___ Yes N/A No

if yes,

- a. List these wastes and the test procedures used to determine concentrations below:

3. Were these analyses conducted onsite or offsite ? _____

A. If offsite, identify lab: _____

4. Describe the frequency of sampling restricted wastes below:

Attach copy of most recent waste analysis.

Section II. Storage of Restricted Wastes

1. Have restricted wastes exceeding treatment standards been stored ?

___ Yes ___ No

if yes,

- A. Have all containers been clearly marked to identify contents and date(s) entering storage ?

___ Yes ___ No

- B. Do operating records track location, quantity, and dates that restricted wastes entered and were removed from storage ?

___ Yes ___ No

- C. Do records agree with container labeling ?

___ Yes ___ No

- D. Are restricted wastes stored for less than 1 year ?

___ Yes ___ No

- E. Have tanks been emptied at least once per year, and do operating records show that volumes of restricted wastes removed from tanks at least equal tank volume ?

___ Yes ___ No

Form B - Treatment, Storage and Disposal (cont'd)

F. Have restricted wastes been stored for more than one year ? ___ Yes N/A No

i. If yes, can the owner/operator demonstrate that the purpose of such storage has been solely conducted for accumulating sufficient quantities of restricted wastes to facilitate proper recovery, treatment, or disposal ? ___ Yes ___ No

Section III. Storage or treatment in surface impoundments

1. Have restricted wastes exceeding treatment standards been placed in surface impoundments ? ___ Yes ___ No

A. If yes, have these wastes and their residues been removed at least annually ? ___ Yes ___ No

B. If no, skip the remainder of this section.

2. Have these wastes been placed for treatment ? ___ Yes ___ No

A. If yes, describe treatments processes below:

3. Is the only recognizable "treatment" occurring in the impoundment either evaporation, dilution, or both ? ___ Yes ___ No

4. Did the facility submit a certification of compliance with minimum technology and groundwater monitoring requirements, and the waste analysis plan to the Agency ? ___ Yes ___ No

5. Have minimum technology requirements been met ? ___ Yes ___ No

A. If no, have waivers been granted for each restricted waste management unit ? ___ Yes ___ No

6. Have all 264/265 Subpart F groundwater monitoring requirements been met ? ___ Yes ___ No

Form B - Treatment, Storage and Disposal (cont'd)

7. Have representative samples of sludge and supernatant from applicable surface impoundments been tested adequately and in accordance with sampling frequency and analysis specified in the waste analysis plan ? ___ Yes N/A No
- A. Are test results maintained in the operating record ? ___ Yes ___ No
- B. Did hazardous waste residues (i.e. sludge or liquid) exceed treatment standards as specified in 268.41 ? ___ Yes ___ No
- C. Provide the frequency of analyses conducted on treatment residues below:
- _____

- D. Do operating records adequately document results of waste analyses performed in accordance with 268.41 ? ___ Yes ___ No
8. Has supernatant been determined to exceed treatment standards ? ___ Yes ___ No
- A. If yes, is annual throughput greater than surface impoundment volume ? ___ Yes ___ No
9. If residues were removed annually, have adequate precautions been taken to protect liners and do records indicate that inspections of liner integrity are performed ? ___ Yes ___ No
10. When removed, were solvent wastes managed subsequently in another surface impoundment ? ___ Yes ___ No
11. When removed, were wastes treated prior to disposal ? ___ Yes ___ No
- A. If yes, are waste residues treated onsite or offsite ? _____
- B. Describe management method below:
- _____

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Facility Name: Cedar Chemical
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Form B - Treatment, Storage and Disposal (cont'd)

Section IV. RCRA-regulated Treatment (not including surface impoundments)

1. Did the facility operate treatment facilities for restricted wastes ?

___ Yes N/A No

If no, skip the rest of Section IV.

2. Describe processes for each restricted waste treated onsite:

3. Does the facility treat soft hammer wastes ?

___ Yes ___ No

If yes,

- A. Is treatment occurring as described in the facility's certification/demonstration ?

___ Yes ___ No

- B. Did the treatment facility certify all soft hammer waste as per the facility's demonstration and maintain copies of all certifications ?

___ Yes ___ No

- C. Did the facility send a copy of the demonstration and certification to the receiving treatment, recovery, or storage facility ?

___ Yes ___ No

4. Does the treatment facility test the treatment residuals in accordance with an acceptable waste analysis plan ?

___ Yes ___ No

5. Do treatment residuals exceed treatment standards ?

___ Yes ___ No

If yes,

- A. Describe processes used to handle those residuals ?

- B. Describe the frequency of testing of treatment residuals below:

6. Was dilution used as a substitute for treatment ?

___ Yes ___ No

Form B - Treatment, Storage and Disposal (cont'd)

7. Are certifications and results of waste analyses kept in the operating record ?

___ Yes N/A No

If any treatment residuals were shipped offsite for further treatment or disposal, complete Form C - Manifesting Restricted Wastes.

Section V. Land Disposal

1. Were restricted wastes placed in land disposal units (i.e. surface impoundments, waste piles, wells, land treatment units, salt domes/beds, mines/caves, concrete vaults, or bunkers) for other than treatment purposes ?

___ Yes ___ No

2. Did the facility have appropriate notices or certifications from generators or treatment facilities in its operating record [268.7(a-b)] ?

___ Yes ___ No

3. Did the facility obtain waste analyses of restricted wastes to determine if such wastes were in compliance with applicable treatment standards [268.7(c)] ?

___ Yes ___ No

4. Were restricted wastes exceeding the applicable treatment standards or prohibition levels placed in land disposal units excluding national capacity variances ?

___ Yes ___ No

If yes,

- A. Did the facility have an approved waiver based on "no migration" petition, approved case-by-case, capacity extension, or treatment standard variance ?

___ Yes ___ No

5. Were restricted wastes, subject to national or case-by-case capacity variances or extensions, disposed ?

___ Yes ___ No

If yes,

- A. Were these wastes disposed of in a hazardous waste management unit that meets minimum technology requirements ?

___ Yes ___ No

6. Are adequate records of disposal maintained ?

___ Yes ___ No

Facility Name: Cedar Chemical
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Form B - Treatment, Storage and Disposal (cont'd)

7. If wastes subject to nationwide variances, case-by-case extensions, or no migration petitions were disposed, does the facility have notices and records of disposal ?
___ Yes N/A No
8. If the facility has a case-by-case extension, is there data available to verify that the facility is making progress as described in progress reports ?
___ Yes ___ No
9. If the facility is disposing of a soft hammer waste, are notices or certifications maintained onsite ?
___ Yes ___ No
- If yes,
- A. Could any of these wastes be classified as California List wastes ?
___ Yes ___ No
- B. Did the facility seek to verify whether these wastes are subject to all restrictions ?
___ Yes ___ No

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Facility Name: Cedar Chemical
EPA Id Number: ARD 990660649
7-16-90

LAND DISPOSAL RESTRICTION CHECKLIST FOR FY 1989

Form C - Manifesting Restricted Wastes

Note: This form should be completed only if the generator or handler ships restricted waste offsite for treatment or disposal. The following requirements may also apply to treatment facilities (including incinerators) which ship residues, still bottoms, or ash offsite for additional treatment or disposal.

1. If restricted wastes which exceed treatment standards, and are not subject to case-by-case extensions, "no migration" exemption, or nationwide variance, did the generator or handler provide the following information along with each hazardous waste manifest during shipment:

- A. Manifest document number ? ☒ Yes ☐ No
- B. EPA waste identification code ? ☒ Yes ☐ No
- C. Treatment standards for each restricted waste ? ☒ Yes ☐ No
- D. Waste analysis data (if available) ? ☒ Yes ☐ No
- E. All applicable restrictions ? ☒ Yes ☐ No

Notice: Restricted wastes which exceed treatment standards may only be sent for treatment (including incineration). Such wastes are prohibited from land disposal, unless there is a variance or extension applicable to the waste.

2. Identify all offsite treatment facilities accepting wastes exceeding treatment standards:

Empak, Inc. - Deer Park TX
Gibraltar Chemical - Winona TX
Rollins Environmental - Plaquemine LA

3. If restricted wastes do not exceed treatment standards, are subject to case-by-case extension, have a "no migration" exemption, or a nationwide variance, did the generator or handler provide the following information along with each hazardous waste manifest during shipment:

None

- A. Manifest document number ? ☐ Yes ☒ N/A ☐ No

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Facility Name: Codan Chemical
EPA Id Number: ARD 990660649
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Form C - Manifesting Restricted Wastes (cont'd)

- B. EPA waste identification code ? ☐ Yes N/A ☐ No
- C. Treatment standards for each restricted waste ? ☐ Yes ☐ No
- D. Waste analysis data (if available) ? ☐ Yes ☐ No
- E. All applicable restrictions ? ☐ Yes ☐ No
- F. Date the wastes are subject to restrictions ? ☐ Yes ☐ No
- G. The following certification ? ☐ Yes ☐ No

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of imprisonment.

Notice: The above certification statement must be signed by an authorized representative of the facility.

4. Identify all offsite treatment or disposal facilities accepting wastes below treatment standards:

_____ N/A

5. If waste is subject to a nationwide variance (e.g. solvent-water mixtures less than 1%), extension or petition has the facility provided notice to disposers that waste is exempt from land disposal restrictions ? ☐ Yes N/A ☐ No
6. Does the generator or handler keep records of all notifications or certifications for waste sent to offsite facilities after August 16, 1988 ? ☒ Yes ☐ No

LAND DISPOSAL RESTRICTION CHECKLIST FOR FY 1989

Form D - Testing and Management of F-solvents and Dioxins

Note: This form should be completed only if the facility generates or handles F-solvents or Dioxin wastes regardless of concentrations.

None

1. Has the facility correctly determined the appropriate treatability group [268.41] for F-solvents generated or handled onsite (see Appendix A) ? ___ Yes N/A No
2. Has the facility determined whether F-solvent wastes exceed treatment standards based on the following:
 - A. Knowledge of process ? ___ Yes ___ No
 - i. If facility employs knowledge of process, note adequacies or inadequacies in their methods below:

 - B. Toxicity Characteristic Leaching Process (TCLP) ? ___ Yes ___ No
 - i. If yes, provide the following information:
 - a. Last test date: _____
 - b. Frequency of testing: _____
 - c. Indicate any problems with testing procedure below:

 - ii. Attach test results to report.
 - iii. Were wastes tested using TCLP when processes or wastestreams changed ? ___ Yes ___ No
 - iv. Was testing done prior to dilution or solidification ? ___ Yes ___ No
 - C. Other (specify): _____
3. Did F-solvent wastes exceed their applicable treatment standards upon generation [268.7(a)(2)] ? ___ Yes ___ No

Facility Name Cedar Chemical
EPA Id Number ARD 990660649
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Form D - Testing and Management of F-solvents and Dioxins (cont'd)

4. Did the facility dilute the waste or treatment residuals as a substitute for adequate treatment [268.3] ? Yes N/A No

5. Were treatment residuals generated from 264/265 RCRA-exempt units or processes ? Yes No

If yes,

A. List the type(s) of treatment and unit(s) below:

Note: If the residuals from a RCRA-exempt treatment unit are above the treatment standards, the owner/operator is considered a generator of restricted waste. The inspector should determine whether the generator requirements, particularly waste identification requirements, have been met for the treatment residuals.

6. Have F-solvents or dioxin wastes been stored for greater than 90 days ? Yes No

If yes,

A. Is facility operating under interim status or final permit ? Yes No

If the answer was yes for either 6 or 6A, complete Form B - Treatment, Storage and Disposal.

LAND DISPOSAL RESTRICTION CHECKLIST FOR FY 1989

Form E - Testing and Management of California List Wastes

Note: This form should be completed only if the facility generates or handles California List wastes at the concentrations listed in Form A - Restricted Waste Determination.

1. Has the facility conducted any testing of restricted wastes to determine whether the concentrations qualify them as California Wastes ?

☒ Yes ☐ No

If no,

Has the facility retained records documenting that the waste is not restricted under the California List by knowledge of process ?

☐ Yes ☒ No

2. Has the Paint Filter Liquids Test (PFLT) been performed as described by SW-846 to determine whether California List wastes (except halogenated organic compounds) are in liquid form ?

☒ Yes ☐ No

3. If wastes have been determined to be in liquid form, were these wastes solidified using an absorbent ?

☐ Yes ☒ No

A. If yes, note type of absorbent used: N/A

B. Indicate which wastes were solidified by absorbent below:

Check each box that applies:

- ☐ Liquid hazardous wastes or liquids associated with solids or sludges containing free cyanides at concentration greater than 1000 mg/L.
- ☐ Liquid hazardous wastes or liquids associated with solids or sludges containing one or more of the following concentrations:
- ☐ Arsenic or compounds containing arsenic greater than 500 mg/L;
 - ☐ Cadmium or compounds containing cadmium greater than 100 mg/L;
 - ☐ Chromium or compounds containing chromium greater than 500 mg/L;
 - ☐ Lead or compounds containing lead greater than 500 mg/L;

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Facility Name: Delta Chemical
EPA Id Number: ARO 990660649
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Form E - Testing and Management of California List Wastes (cont'd)

- ☐ Mercury or compounds containing mercury greater than 20 mg/L;
- ☒ Nickel or compounds containing nickel greater than 134 mg/L;
- ☐ Selenium or compounds containing selenium greater than 100 mg/L; or
- ☐ Thallium or compounds containing Thallium greater than 130 mg/L.

- ☒ Liquid hazardous wastes exhibiting a pH less than or equal to 2.0.
- ☐ Liquid hazardous wastes that also contain polychlorinated biphenols (PCBs) at concentrations between 50 to 500 mg/L.
- ☐ Liquid or nonliquid hazardous waste containing halogenated organic compounds at concentrations greater than or equal to 1000 mg/Kg.

4. Has the facility determined whether concentration levels of the analytes (not extracts or filtrates) equal or exceed prohibition levels or whether the pH of the wastes is less than or equal to 2.0 based on:

A. Knowledge of process ?

☒ Yes ☐ No

i. If facility employs knowledge of process, note adequacies or inadequacies in their methods below:

Knowledge of process is adequate

B. Testing ?

☒ Yes ☐ No

i. Did the facility determine if concentration levels in PFLT extracts exceed cyanide or metal treatment standards ?

☒ Yes ☐ No

ii. List the test methods used: Method 412C, Titrimetric Method, Standard Methods of Water and Wastewater Analysis 15th Edition

iii. List constituents and respective concentration levels for wastes found to exceed prohibition levels below:

< 0.1 mg/l CN (Cypermethrin Waste Water) does not exceed prohibition level

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Facility Name: Adar Chemical

EPA Id Number: ARD 990660649

21690

Form E - Testing and Management of California List Wastes (cont'd)

5. Has the facility treated waste onsite or offsite: onsite (elementary neutralization is an exempt process)
- A. If onsite, complete Form B - Treatment, Storage, and Disposal.
- B. If offsite, complete Form C - Manifesting Restricted Wastes.

LAND DISPOSAL RESTRICTION CHECKLIST FOR FY 1989

Form F - Testing and Management of "First Third" Wastes

Note: This form should be completed only if the facility generates or handles wastes restricted under the "First Third" list (August 17, 1988).

I. Hard Hammer Provisions

1. Has the facility correctly determined the appropriate treatability group for hard hammer wastes generated or handled onsite? Yes No

2. Has the facility determined whether hard hammer wastes exceed treatment standards based on the following:

A. Knowledge of process? Yes No

i. If facility employs knowledge of process, note adequacies or inadequacies in their methods below:

B. Toxicity Characteristic Leaching Process (TCLP)? Yes No

i. If yes, provide the following information:

a. Last test date: _____

b. Frequency of testing: _____

c. Indicate any problems with testing procedure below:

ii. Attach test results to report.

iii. Were wastes tested using TCLP when processes or wastestreams changed? Yes No

iv. Was testing done prior to dilution or solidification? Yes No

Form F - Testing and Management of "First Third" Wastes

C. Other (specify): N/A

3. Did the hard hammer wastes exceed their applicable treatment standards upon generation [268.7(a)(2)] ? Yes No
4. Is there any reason to believe that the facility may have diluted these wastes to change the applicable treatment standard (based on review of process operation, pipe routing, point of sampling, etc.) ? Yes No
5. Did the facility ascertain whether hard hammer wastes were appropriately assigned wastewater on non-wastewater designations (nonwastewaters are > 1% TOC and > 1% suspended solids) ? Yes No
6. Does the facility handle K061 wastes ? Yes No
- If yes,
- A. Were nonwastewaters appropriately classified in either the high or low zinc subcategories (> 15% Zn) ? Yes No
7. Does the facility handle K101 or K102 wastes ? Yes No
- If yes,
- A. Were nonwastewaters appropriately classified in either the high or low arsenic subcategories ? Yes No
8. Have hard hammer wastes been stored for greater than 90 days ? Yes No
- If yes,
- A. is facility operating under interim status or final permit ? Yes No

If the answer was yes for either 8 or 8A, complete Form B - Treatment, Storage and Disposal.

Facility Name Codal Chemical
 EPA Id Number. ARD 990660649
2-16-90

Form F - Testing and Management of "First Third" Wastes

II. Soft Hammer Provisions

1. Has the facility submitted demonstrations and certifications for each soft hammer waste destined for disposal in landfills or surface impoundments to the Regional Administrator prior to the shipment of the waste to the disposal facility ?

 Yes N/A No

If yes,

- i. Has the facility retained a copy of each demonstration onsite ?

 Yes No

- ii. Has the facility retained copies of all certifications sent to the disposal facility ?

 Yes No

2. Has the facility sent copies and kept copies of the following information with each shipment of soft hammer wastes:

- A. Manifest document number ?

 Yes No

- B. EPA waste identification code ?

 Yes No

- C. All applicable restrictions ?

 Yes No

- D. Waste analysis data (if available) ?

 Yes No

- E. Applicable certifications ?

 Yes No

3. Do facility records indicate that soft hammer wastes are destined for disposal in landfills or surface impoundments ?

 Yes No

If yes,

- A. List the name of the waste(s) destined for disposal:

- B. Name the facility where the waste is destined:

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Facility Name: Cedar Chemical
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7-16-90

Form F - Testing and Management of "First Third" Wastes

4. Have soft hammer wastes been stored for greater than 90 days ?

☐ Yes ☒ No

A. If yes, is facility operating under interim status or final permit ?

☐ Yes ☒ No

If the answer was yes for either 4 or 4A, complete Form B - Treatment, Storage and Disposal.

F

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444

May 9, 1990

CSN: 540060 Permit No.
Media: Air, Water, Solid, Hazardous, Superfund, UST
Sort: Permit, Compliance

Mr. Joe Porter
Cedar Chemical Corporation
P.O. Box 2749
West Helena, AR 72390

RE: Cedar Chemical Corporation
Site Characterization

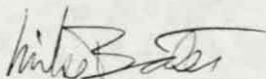
Dear Mr. Porter:

The Department has reviewed the draft documents concerning the site characterization and drum disposal area delineation work plan, dated April 1990, for Cedar Chemical Corporation, located in West Helena, Arkansas.

Enclosed are the Department's comments to the draft work plan. Cedar Chemical Corporation should be aware that an approval for remedial activities short of a facility wide investigation will not be approved by the Department.

If you have any questions or concerns, please feel free to call.

Sincerely,



Mike Bates
Chief
Hazardous Waste Division

DW:LTR132

ENCLOSURE

cc: Ken Bown, Manager, Technical Branch, HWD
Derick Warrick, Engineer II, Tech Branch, HWD
David Hartley, Geologist, Hazardous Waste Division

Cedar Chemical Corporation

SITE CHARACTERIZATION AND
DRUM DISPOSAL AREA DELINEATION
WORK PLAN

April 1990

Deficiency List

1. The laboratory QA/QC plan as referenced in Appendix B is not included.
2. Cedar Chemical Corporation proposes to test for only DNBP in this particular 1.2 acre area. Parameters for soil testing should be expanded to include a range of constituents which were historically manufactured at the facility, since any number of them could possibly be buried.
3. The plan states a clean-up level of 80 ppm DNBP based on a health based standard. This level may not be protective of the groundwater/surface water. The Department can only approve clean-up levels which are protective of human health and the environment, hence, eco-systems must also be considered in respect to clean-up levels. Clean-up levels should include other parameters than only DNBP.
4. A leachability study of the contaminated soil should be done to determine an acceptable concentration to be left-in-place.
5. Cedar Chemical Corporation has proposed to composite soil boring samples at five (5) foot intervals. Soil borings taken in contaminated zones should not be composited.
6. Based on the information the Department has, DNBP is extremely toxic and has a probable oral lethal dose of 5-50 mg/kg (7 drops to 1 teaspoon) for a 70 kg person. Level D should not be implemented on any site with respiratory or skin hazards. A minimum of level C should be worn by all personnel who will be in direct contact with the drums during excavation or sampling due to the toxicity of DNBP.
7. The health and Safety Plan should recognize the hazards associated with trenching. Any workers working in a trench should be in at least Level C protection.
8. The sampling and analysis plan does not incorporate a plan for sampling the bottom of excavation for the assurance of complete removal of contaminated soils.

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO : Mike Bates, Chief, Hazardous Waste Division
THROUGH : Jim Rigg, Geologist III, Hazardous Waste Division
FROM : David Hartley, Geologist II, Hazardous Waste Division DH
DATE : 7-MAY-1990
SUBJECT : April 27, 1990 Draft document submittal, Cedar Chemical Corp

I have reviewed the draft documents concerning site characterization and drum removal and have the following comments.

1. The magnetometer/gradiometer survey appears to be adequate to locate buried metal drums. The proposed 10 foot station spacing should be sufficient to locate magnetic anomalies and delineate areas of probability that drums would be buried at, that is, assuming that these are metal drums.
2. Cedar has proposed to do the magnetometer/gradiometer survey in only the 1.2 acre site of their planned expansion. I have discussed this with Joe Porter and have recommended to him that, at a minimum, the area they are building their new offices should also be included. He did not seem to have any objections. The soil boring plan should also include this area as well. I do not have any objections to Cedar starting the magnetometer survey if they include the office complex site. The remainder of the site will have to be addressed in their final report.
3. The sampling and analysis plan appears to be deficient in the following areas.
 - a. The laboratory QA/QC plan has apparently been left out of the submittal. A detailed description of the QA/QC plan is referenced to be in Appendix B, which is not in the plan.
 - b. Cedar is proposing to do their own analysis and have only proposed to test for DNBP. Parameters should be expanded because historically the plan has manufactured numerous chemicals and any number of them could be buried.
 - c. Clean-up level has been proposed at 80 ppm DNBP. I have not confirmed this to be an acceptable level. DNBP is extremely toxic and, according to the CAMEO printout I have, has a probable oral lethal dose of 5-50 mg/kg (7 drops to 1 teaspoon) for a 70 kg. person. DNBP is a "first third" waste but currently does not have an established treatment standard under land ban.

Clean-up level should include other parameters than only DNBP.

- d. Cedar has proposed to composite soil borings at 5 foot intervals. If we require expanding the analytical parameters, composite samples may not be adequate for all types of samples such as volatiles.
- e. The health and safety plan calls for modified level D protection for all workers including sampling and drum removal based on air monitoring. Modified level D does not include respiratory protection. Level D should not be worn on any site with respiratory or skin hazards. Level C should be worn by all personnel who will be in direct contact with the drums during excavation or sampling due to the toxicity of DNBP and due to the fact that Cedar Chemical does not know what is buried there.
- f. The health and safety plan should recognize hazardous associated with trenching. Any workers working in the trench definitely should be in at least Level C protection.

DH/ckh:MEM323

cc: Derrick Warrick

CHARLES W. METCALF, 1840-1924
WILLIAM P. METCALF, 1872-1940
JOHN W. APPERSON, 1896-1985

CHARLES METCALF CRUMP
JERRE G. DUZANE
JOHN B. MAXWELL, JR.
ALLEN T. MALONE
PHILIP G. KAMINSKY
ROBERT L. DINKELSPIEL
MICHAEL E. HEWGLEY
JAMES F. RUSSELL
JOHN L. RYDER
THOMAS R. BUCKNER
TONI CAMPBELL PARKER
MELODY W. OLIVER
WILLIAM B. MASON, JR.
STEVEN N. DOUGLASS
RANDY S. GARDNER

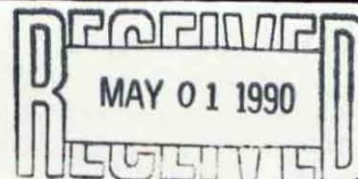
SAMUEL RUBENSTEIN
OF COUNSEL

LAW OFFICES
APPERSON, CRUMP, DUZANE & MAXWELL

SUITE 2110
ONE COMMERCE SQUARE
MEMPHIS, TENNESSEE 38103
901/525-1711

TELECOPY 901/521-0789

April 30, 1990



EAST OFFICE

SUITE 100
KIRBY CENTRE
1755 KIRBY PARKWAY
MEMPHIS, TENNESSEE 38119
901/756-6300
TELECOPY 901/757-1296

Mr. David Hartley ✓
Geologist
Hazardous Waste Division
Arkansas Department of Pollution
Control & Ecology
8001 National Drive
Little Rock, Arkansas 72209

EXPRESS MAIL

CSN: 54.006.8 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

Re: Cedar Chemical Corporation
West Helena Plant

Dear David:

Enclosed is EPA's "Health-Based Criteria For Systemic Toxicants," which is included as Table 8-7 in the "Interim Final RCRA Facility Investigation (RFI) Guidance" document, Volume I. EPA's Region IV has confirmed that the clean-up standard for DNBP (dinoseb) in soil (8E+01MG/KG) means 80 parts per million. This is the basis for the clean-up level indicated in Woodward-Clyde's draft work plan for remediation of any contaminated soil in the vicinity of the buried DNBP drums which were recently discovered at the West Helena Plant.

We appreciate your spending time with Joe Porter and me last Friday. As we discussed, Cedar would like to proceed with the investigation phase outlined in the Woodward-Clyde document this week, so we would appreciate input from the Department as soon as possible.

This also confirms that Cedar will be prepared to begin discussing with the Department a voluntary, expanded RFI at the West Helena Plant following submission of the groundwater monitoring report required by the 1986 Consent Administrative Order.

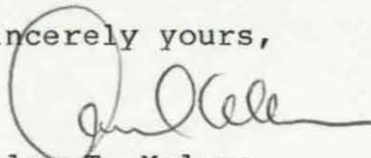
Finally, this also confirms that, per my previous understanding with Karen Williams, Joe Porter and I should both be notified prior to the formal rejection of the West Helena Plant's previous RCRA Part B Application. While the company has

APPERSON, CRUMP, DUZANE & MAXWELL

Mr. David Hartley
April 30, 1990
Page Two

indicated its desire to withdraw the application and, as I understand it, has been removed from the TSD Regulatory Scheme under RCRA since the clean closure of its waste storage areas, it is possible that Cedar may decide in the future to amend the application to provide for an on-site incinerator.

Sincerely yours,



Allen T. Malone

ATM:jw

Enclosure

cc: Mr. Joe Porter

Weston's
Merit Opaque
45% COTTON FIBER

Table 8-7. Health-Based Criteria for Systemic Toxicants¹

Constituent	CAS No.	RfD ² (mg/kg/day)	Soil (mg/kg)	Water (µg/l)	Air (µg/m ³)
Acetone	67-64-1	1E-01	8E+03	4E+03	--
Acetonitrile	75-05-8	6E-03	5E+02	2E+02	--
Acetophenone	98-86-2	1E-01	8E+03	4E+03	--
Aldicarb	116-06-3	1E-03	8E+01	4E+01	5E+00
Aldrin	309-00-2	3E-05	2E+00	1E+00	--
Allyl alcohol	107-18-6	5E-03	4E+02	2E+02	--
Aluminum phosphide	20859-73-8	4E-04	3E+01	1E+01	--
Antimony	7440-36-0	4E-04	3E+01	1E+01	--
Barium	7440-39-3	5E-02	4E+03	See MCL	--
Barium cyanide	542-62-1	7E-02	6E+03	2E+03	--
Benzidine	92-87-5	2E-03	2E+02	7E+01	--
Beryllium	7440-41-7	5E-03	4E+02	2E+02	--
Bis(2-ethylhexyl) phthalate	117-81-7	2E-02	2E+03	7E+02	--
Bromodichloromethane	75-27-4	2E-02	2E+03	7E+02	7E+01
Bromoform	75-25-2	2E-02	2E+03	7E+02	--
Bromomethane	74-83-9	4E-04	3E+01	1E+01	--
Calcium cyanide	592-01-8	4E-02	3E+03	1E+03	--
Carbon disulfide	75-15-0	1E-01	8E+03	4E+03	--
Carbon tetrachloride	56-23-5	7E-04	6E+01	See MCL	--
Chlordane	57-74-9	5E-05	4E+00	2E+00	--
Chlorine cyanide	506-77-4	5E-02	4E+03	2E+03	--
Chlorobenzene	108-90-7	3E-02	2E+03	1E+03	--
1-Chloro-2,3 epoxypropane (Epichlorohydrin)	106-89-8	2E-03	2E+02	7E+01	--
Chloroform	67-66-3	1E-02	8E+02	4E+02	--
Chromium (III)	16065-83-1	1E+00	8E+04	4E+04	--
Chromium (VI)	7440-47-3	5E-03	4E+02	See MCL	--
Copper cyanide	544-92-3	5E-03	4E+02	2E+02	--
Cresols	1319-77-3	5E-02	4E+03	2E+03	--
Crotonaldehyde	123-73-9	1E-02	8E+02	4E+02	--
Cyanide		2E-02	2E+03	7E+02	--
Cyanogen	460-19-5	4E-02	3E+03	1E+03	--
2,4-D	94-75-7	1E-02	8E+02	See MCL	--
DDT	50-29-3	5E-04	4E+01	2E+01	--
Di-n-butylphthalate	84-74-2	1E-01	8E+03	4E+0	--

Note: These criteria are subject to change and will be confirmed by the regulatory agency prior to use.

Table 8-7. (continued)¹

Constituent	CAS No.	RfD ² (mg/kg/day)	Soil (mg/kg)	Water (µg/l)	Air (µg/m ³)
Dichlorodifluoromethane	75-71-8	2E-01	2E + 04	7E + 03	--
1,1-Dichloroethylene	75-35-4	9E-03	7E + 02	See MCL	--
Dichloromethane (Methylene chloride)	75-09-2	6E-02	5E + 03	2E + 03	--
2,4-Dichlorophenol	120-83-2	3E-03	2E + 02	1E + 02	1E + 01
1,3-Dichloropropene	26952-23-8	3E-04	2E + 01	1E + 01	--
Dieldrin	60-57-1	5E-05	4E + 00	2E + 00	--
Diethyl phthalate	84-66-2	8E-01	6E + 04	3E + 04	--
Dimethoate	60-51-5	2E-02	2E + 03	7E + 02	--
2,4-Dinitrophenol	51-28-5	2E-03	2E + 02	7E + 01	7E + 00
Dinoseb	88-85-7	1E-03	8E + 01	4E + 01	--
Diphenylamine	127-39-4	3E-02	2E + 03	1E + 03	--
Disulfoton	298-04-4	4E-05	3E + 00	1E + 00	--
Endosulfan	115-29-7	5E-05	4E + 00	2E + 00	2E-01
Endothal	145-73-3	2E-02	2E + 03	7E + 02	--
Endrin	72-20-8	3E-04	2E + 01	See MCL	1E + 00
Ethylbenzene	100-41-4	1E-01	8E + 03	4E + 03	--
Heptachlor	76-44-8	5E-04	4E + 01	2E + 01	--
Heptachlor epoxide	1024-57-8	1E-05	8E-01	4E-01	--
Hexachlorobutadiene	87-68-3	2E-03	2E + 02	7E + 01	--
Hexachlorocyclopentadiene	77-47-4	7E-03	6E + 02	2E + 02	--
Hexachloroethane	67-72-1	1E-03	8E + 01	4E + 01	--
Hydrogen cyanide	74-90-8	2E-02	2E + 03	7E + 02	--
Hydrogen sulfide	7783-06-4	3E-03	2E + 02	1E + 02	--
Isobutyl alcohol	78-83-1	3E-01	2E + 04	1E + 04	1E + 03
Isophorone	78-59-1	2E-01	2E + 04	7E + 03	--
Lindane (hexachlorocyclohexane)	58-89-9	3E-04	2E + 01	See MCL	--
Maleic hydrazide	108-31-6	5E-01	4E + 04	2E + 04	--
Methacrylonitrile	126-98-7	1E-04	8E + 00	4E + 00	--
Methomyl	16752-77-5	3E-02	2E + 03	1E + 03	--
Methyl ethyl ketone	78-93-3	5E-02	4E + 03	2E + 03	--
Methylisobutyl ketone	108-10-01	5E-02	4E + 03	2E + 03	--

Note: These criteria are subject to change and will be confirmed by the regulatory agency prior to use.

Table 8-7. (continued)¹

Constituent	CAS No.	RfD ² (mg/kg/day)	Soil (mg/kg)	Water (ug/l)	Air (ug/m ³)
2,3,4,6-Tetrachlorophenol	58-90-2	3E-02	2E+03	1E+03	1E+02
Tetraethyl lead	78-00-2	1E-07	8E-03	4E-03	4E-04
Thallic oxide	1314-32-5	4E-04	3E+01	1E+01	--
Thallium acetate	563-68-8	5E-04	4E+01	2E+01	--
Thallium carbonate	6533-73-9	4E-04	3E+01	1E+01	--
Thallium chloride	7791-12-0	4E-04	3E+01	1E+01	--
Thallium nitrate	10102-45-1	5E-04	4E+01	2E+01	--
Thallium selenite	12039-52-0	5E-04	4E+01	2E+01	--
Thallium sulfate	10031-59-1	3E-04	2E+01	1E+01	--
Thiram	137-26-8	5E-03	4E+02	2E+02	--
Toluene	108-88-3	3E-01	2E+04	1E+04	--
1,2,4-Trichlorobenzene	120-82-1	2E-02	2E+03	7E+02	--
1,1,1-Trichloroethane	71-55-6	9E-02	7E+03	See MCL	--
1,1,2-Trichloroethane	79-00-5	2E-01	2E+04	7E+03	--
Trichloromono-fluoromethane	75-69-4	3E-01	2E+04	1E+04	--
2,4,5-Trichlorophenol	95-95-4	1E-01	8E+03	4E+03	4E+02
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	93-76-5	3E-03	2E+02	See MCL	--
1,1,2-Trichloropropane	598-77-6	5E-03	4E+02	2E+02	--
1,2,3-Trichloropropane	96-18-4	1E-03	8E+01	4E+01	--
Vanadium pentoxide	1314-62-1	2E-02	2E+03	7E+02	--
Warfarin	81-81-2	3E-04	2E+01	1E+01	--
Xylene (total)	1330-20-7	2E+00	2E+05	7E+04	--
Zinc cyanide	557-21-1	5E-02	4E+03	2E+03	--
Zinc phosphide	1314-84-7	3E-04	2E+01	1E+01	--

- 1 These criteria are subject to change and will be confirmed by the regulatory agency prior to use.
- 2 See Table 8-2 for the appropriate intake assumptions used to derive these criteria.

Table 8-7. (continued)¹

Constituent	CAS No.	RfD ² (mg/kg/day)	Soil (mg/kg)	Water (µg/l)	Air (µg/m ³)
Methyl mercury	22967-92-6	3E-04	2E+01	1E+01	--
Methyl parathion	298-00-0	3E-04	2E+01	1E+01	1E+00
Nickel	7440-02-0	2E-02	2E+03	7E+02	--
Nitric oxide	10102-43-9	1E-01	8E+03	4E+03	--
Nitrobenzene	98-95-3	5E-04	4E+01	2E+01	--
Nitrogen dioxide	10102-44-0	1E+00	8E+04	4E+04	--
Octamethylpyrophosphoramide	152-16-9	2E-03	2E+02	7E+01	--
Parathion	56-38-2	3E-04	2E+01	1E+01	--
Pentachlorobenzene	608-93-5	8E-04	6E+01	3E+01	3E+00
Pentachloronitrobenzene	82-68-8	3E-03	2E+02	1E+02	--
Pentachlorophenol	87-86-5	3E-02	2E+03	1E+03	1E+02
Perchloroethylene (Tetrachloroethylene)	127-18-4	1E-02	8E+02	4E+02	--
Phenol	108-95-2	4E-02	3E+03	1E+03	--
Phenylmercuric acetate	62-38-4	8E-05	6E+00	3E+00	--
Phosphine	7803-51-2	3E-04	2E+01	1E+01	--
Potassium cyanide	151-50-8	5E-02	4E+03	2E+03	--
Potassium silver cyanide	506-61-6	2E-01	2E+04	7E+03	--
Pronamide (Kerb)	23950-58-5	8E-02	6E+03	3E+03	--
Pyridine	110-86-1	1E-03	8E+01	4E+01	--
Selenious Acid	7782-49-2	3E-03	2E+02	See MCL	--
Selenourea	630-10-4	5E-03	4E+02	2E+02	--
Silver	7440-22-4	3E-03	2E+02	See MCL	--
Silver cyanide	506-64-9	1E-01	8E+03	4E+03	--
Silvex (2,4,5-TP)	93-72-1	8E-03	6E+02	3E+02	--
Sodium cyanide	143-33-9	4E-02	3E+03	1E+03	--
Strychnine	57-24-9	3E-04	2E+01	1E+01	--
Styrene	100-42-5	2E-01	2E+04	7E+03	--
1,2,4,5-Tetrachlorobenzene	95-94-3	3E-04	2E+01	1E+01	1E+00

Note: These criteria are subject to change and will be confirmed by the regulatory agency prior to use.

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444
FAX: (501) 562-4632

April 24, 1990

Joe Porter
Cedar Chemical Corporation
P.O. Box 2749
West Helena, AR 72390

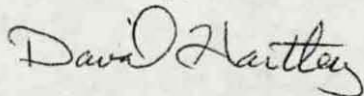
CSN: 540068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

Re: SAMPLE ANALYSIS TEST RESULTS FROM FEBRUARY 16, 1990 SAMPLING
EVENT

Dear Mr. Porter:

Enclosed is a copy of the department's lab results of samples taken
at Cedar Chemical on February 16, 1990. If I can be of further
assistance, please contact me.

Sincerely,



David Hartley
Geologist II
Hazardous Waste Division

DH/mw:cedar-chem-042490dh

Enc.

04-23-90 09:06 AM FROM CEDAR CHEMICAL CORP

CSN: 4008 PERMIT NO. N/A
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390

(501) 572-3701 • Fax No. 501-572-3795

TO: Arkansas Dept of Pollution
Control & Ecology

ATTENTION:

David Hartley

FAX NO:

562-4632

FROM: Joe E. Portaro

DATE: April 23, 1990

NO. OF PAGES: 3 + cover

MESSAGE

Per your Request:

October, December, & February Results

J Portaro

04-23-90 09:06 AM FROM CEDAR CHEMICAL CORP

P02/04

**SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES****WPCF****CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS****8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72208****(501) 562-8139****REPORT OF** LABORATORY ANALYSISDate of Report: NOVEMBER 20, 1989Date Received: OCTOBER 18, 1989For CEDAR CHEMICAL CORPORATION P.O. BOX 2749 WEST HELENA AR 72390Job CEDAR CHEMICAL CORPORATION - TOC & TOH ANALYSIS ON MONITORING WELLSSample From AS LISTED BELOWTRANSPORTED BY SORRELLS RESEARCH.

LABORATORY NO.	SAMPLE I.D.	DATE/TIME	TOH UG/L	TOC MG/L
E202.001	MW 1	10-17-89	783	4.59
	FIELD REPLICATES	10-17-89	765	4.64
E202.002	MW 2	10-17-89	37.9	2.06 + .06
E202.003	MW 3	10-17-89	6570	38.4 + .3
E202.004	MW 4	10-17-89	1840	10.1 + .05
E202.005	MW 6	10-17-89	81.8	3.64 + .08
E202.006	MW 6A	10-17-89	201	2.31 + .05
E202.007	MW 6B	10-17-89	39100	85.9 + .5
E202.008	MW 6C	10-17-89	50800	78.7 + 3.6
E202.009	MW 7	10-17-89	602	7.5 + .07
E202.010	FIELD BLANK	10-17-89	23	1.23 + .02

ANALYSIS BY: K. E. SORRELLS/CECIL SORRELLS**Remarks**

SAMPLE PRESERVATION AND LABORATORY ANALYSIS CONDUCTED ACCORDING TO EPA 40 CFR 136. *TEST/ANALYSIS/TIME/COEFF. VAR. & QA PLAN FILED WITH A. D. P. C. & E. INCLUDES 10 % REPLICATION & 10% RECOVERY STUDIES BY RANDOM SELECTION. CALIB. RECORDS MAINTAINED.

TOC/CAS/10-24(0830)/.83%*TOH/KES/10-27(0900)/S.D. 12% S.R. 98.6%

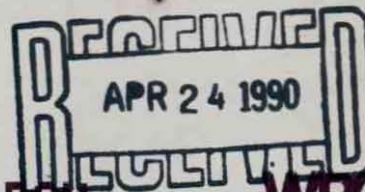
Copies to

2-ABOVE; ATTN: MR. JOE PORTER

Laboratory No. E202.001 - .010 CEDA DKS REVIEWED BY K.E. Sorrells, M.S.
1-WED.NE OCT. 27 AMENDED REPORT ON 11-27-89

04-23-90 09:00 AM FROM CEDAR CHEMICAL CORP

P04/04



WPCF



SORRELLS RESEARCH **LABORATORY AND FIELD SERVICES**

CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS

8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

REPORT OF LABORATORY ANALYSIS

Date of Report: MARCH 5, 1990

Date Received: FEBRUARY 21, 1990

For CEDAR CHEMICAL CORPORATION P.O. BOX 2749 WEST HELENA AR 72390

Job CEDAR CHEMICAL CORPORATION - TOC & TOH ANALYSIS - MONITORING WELLS

Sample From AS LISTED BELOW

TRANSPORTED BY SORRELLS RESEARCH.

LABORATORY NO.	SAMPLE I.D.	DATE/TIME	TOH UG/L	TOC MG/L
E835.001	MW 1	02-16-90	648	5.72 +- .06
E835.002	MW 2	02-16-90	20	2.74 +- .1
E835.003	MW 3	02-16-90	4370	24.97 +- .3
	MW 3 FIELD REPLICATE		3360	24.44 +-2.1
E835.004	MW 4	02-16-90	1970	12.63 +- .05
E835.005	MW 6	02-16-90	53	22.8 +- .5
E835.006	MW 6A	02-16-90	62	2.81 +- .06
E835.007	MW 6B	02-16-90	44000	19.99 +- .1
E835.008	MW 6C	02-16-90	12200	101.8 +- .52
E835.009	MW 7	02-16-90	3500	14.03 +- .1
E835.010	FIELD BLANK	02-16-90	22	2.24 +- .04

ANALYSIS BY: K. E. SORRELLS/CECIL SORRELLS
COLLECTED BY DFK FEB 90 / TRANSPORTED BY KEVIN HALL FEB 2

Remarks

SAMPLE PRESERVATION AND LABORATORY ANALYSIS CONDUCTED ACCORDING TO EPA 40 CFR 136. *TEST/ANALYSIS/TIME/COEFF. VAR. *
QA PLAN FILED WITH A. D. P. C. & E. INCLUDES 10 % REPLICATION & 10% RECOVERY STUDIES BY RANDOM SELECTION. CALIB. RECORDS
MAINTAINED.
TOC/CAS/03-01/* TOH/KES/02-22-90/S.D. 13%

Copies to 2-ABOVE; ATTN: MR. JOE PORTER

Laboratory No.

E835.001 - .010 CEDA LSM
FEB.6A.R./FEB.4.I.

REVIEWED BY

04-23-90 09:06 AM FROM CEDAR CHEMICAL CORP

P03/04



CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS



SORRELLS RESEARCH **LABORATORY AND FIELD SERVICES**

8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

WPCF



(501) 562-8139

LABORATORY ANALYSIS

REPORT OF

Date of Report: DECEMBER 21, 1989
Date Received: DECEMBER 13, 1989

For CEDAR CHEMICAL CORPORATION P.O. BOX 2749 WEST HELENA AR 72350

Job CEDAR CHEMICAL CORPORATION - TOC & TOH ANALYSIS ON MONITORING WELLS

Sample From AS LISTED BELOW

TRANSPORTED BY SORRELLS RESEARCH.

LABORATORY NO.	SAMPLE I.D.	DATE/TIME	TOH UG/L	TOC MG/L
E492.001	MW 1	12-11-89	657	4.964 ± .03
E492.002	MW 2	12-11-89	65.5 ± 1.2	1.74 ± .01
	FIELD REPLICATES	12-11-89	77.0	3.1 ± .02
E492.003	MW 3	12-11-89	4970	26.2 ± .3
E492.004	MW 4	12-11-89	1780	9.72 ± .1
E492.005	MW 6	12-11-89	273	19.34 ± .2
E492.006	MW 6A	12-11-89	35.3	2.37 ± .09
E492.007	MW 6B	12-11-89	31500	84.7 ± .6
E492.008	MW 6C	12-11-89	44800	74.8 ± .9
E492.009	MW 7	12-11-89	979	8.77 ± .09
E492.010	FIELD BLANK	12-11-89	29	.664 ± .02
E492.011	B103191, B103192	12-11-89	< 3	.323 ± .03
E492.012	B103194	12-11-89	—	.25 ± .02

ANALYSIS BY: K. E. SORRELLS/CECIL SORRELLS

Remarks

SAMPLE PRESERVATION AND LABORATORY ANALYSIS CONDUCTED ACCORDING TO EPA 40 CFR 136. TEST/ANALYSIS/TIME/COEFF. VAR. & QA PLAN FILED WITH A. D. P. C. & E. INCLUDES 10 % REPLICATION & 10% RECOVERY STUDIES BY RANDOM SELECTION, CALIB. RECORDS MAINTAINED.

TOC/CAS/12-18(0900)/# TOH/KES/12-14-89/S.D. 8% S.R. 106.1 %

Copies to

2-ABOVE; ATTN: MR. JOE PORTER

Laboratory No. E492.001 - .014 CEDA DKS
1.WED,NE DEC.3

REVIEWED BY

K.E. Sorrells, M.S.

F

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444

April 13, 1990

CSN: 540068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

Mr. Joe Porter
Cedar Chemical Corporation
P. O. Box 2749
West Helena, AR 72390

Dear Mr. Porter:

I have enclosed a copy of a "Facility Investigation" guidance plan per your request for assistance in formulating a clean-up plan for Cedar Chemical's West Helena plant. The plan outlines the steps and tasks necessary to ascertain the extent of contamination present from waste management practices.

If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

W. R. Bates

for Sammy R. Bates
Manager, Enforcement Branch
Hazardous Waste Division

SRB/ckh:LTR836

Enclosure

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO : David Hartley, Geologist II, Groundwater Sec., H.W.
FROM : Jay Justice, Hazardous Waste Chemist, T.S. JJ
DATE : 10-APR-1990
SUBJECT : Results taken from analyses performed on samples
taken from monitoring wells located at Cedar Chemical
Company on February 16, 1990

The samples taken from monitoring wells located at Cedar Chemical Company on February 16, 1990, have been analyzed for TOC and semivolatile organics. The results from these analyses are listed below and are expressed in mg/l.

MW 1

TOC	5.8
1,2-Dichlorobenzene	0.04

MW 2

TOC	2.2
Semivolatile organics	<0.04

MW 3

TOC	21
1,2-Dichlorobenzene	0.28
Dichloroanilines (1)	0.13-0.25
Propanil (1)	0.04-0.09

MW 4

TOC	11
Bromacil (1) (2)	0.04-0.07

MW 6

TOC	18
Semivolatile organics	<0.04

NW 6A

TOC
Semivolatile organics

2.1
<0.04

MW 6B

TOC
1,2-Dichlorobenzene
Chloroanilines (1)
Dichloroanilines (1)
Bromacil (1) (2)

77
0.06
0.32-0.63
14-28
0.07-0.13

MW 6C

TOC
Chloroanilines (1)
Dichloroanilines (1)
Propanil (1)
Bromacil (1) (2)

73
0.16-0.31
13-25
0.15-0.3
0.04-0.09

MW 7

TOC
Substituted monochlorinated Benzotriazoles (1) (2)

10
0.08-0.17

Field Duplicate
(MW 6)

TOC
Semivolatile organics

NA(3)
<0.04

Spike
(Percent Recovery)

Phenol	54
2-Chlorophenol	74
1,4-Dichlorobenzene	59
N-Nitroso-di-n-propylamine	37
1,2,4-Trichlorobenzene	60
4-Chloro-3-methylphenol	71
Acenaphthene	86
Pentachlorophenol	81
Pyrene	96

- (1) This value is an estimate
- (2) Tentatively identified; not confirmed with a standard
- (3) Not analyzed for this parameter

Analytical Results

Analytical data indicates the possibility of two separate sources of contamination indicators. The source of the constituents in the vicinity of MW-3 is unknown but the possibility of buried drums and/or surface soils impacted by plant operations should be considered. The source of the constituents in the vicinity of monitoring wells MW-4, MW-6a, MW-6b, and MW-7 could possibly be related to the radial flow of groundwater from the recharge associated with the biological treatment system. This does not eliminate other sources of the constituents. Consideration must also be given to the areas north and west of the plant being agricultural.

The general monitoring parameters are summarized on an attached table along with regression data for selected pairs of variables. The following table summarizes the ranges of these variables:

	<u>pH</u>	<u>Conductivity</u>	<u>TOX</u>	<u>TOC</u>
Minimum	6.39	700	0.020	1.93
Maximum	8.08	4500	50.800	101.80

The minimum values, except pH, appear to reflect background conditions in the aquifer. Since the aquifer should be greater than 7.0, a decrease in pH may be indicative of a release. Conductivity which reflects the concentration of dissolved electrolytes shows a five fold increase from minimum to maximum. TOX and TOC show increase of 2500 and 52 respectively. There are plots attached that show that as conductivity increases, the pH of the groundwater decreases. The plots also show that organic indicators increase with increasing conductivity.

Cedar Chemical Corporation has collected data from the plant groundwater monitoring system since August of 1988. The data consists of water level data and analytical data from groundwater samples. The water level data was collected from piezometers from August 1988 to June 1990 and from monitoring wells from August 1989 to June 1990. The analytical data was collected from the monitoring wells August 1989 to May 1990.

Monitoring wells were installed at locations recommended by Grubbs, Garnes, & Hoskyn, Inc., Consulting Engineers and based upon data gathered from piezometer measurements. Screened depths were recommended by ADPC & E.

Groundwater Movement

The evaluation of groundwater data from monitoring wells with screens located at approximately equivalent elevations indicates that groundwater movement is approximately from the north-northwest to the south-southwest. However, this movement is modified by one or a combination of the following: radial groundwater flow associated with recharge (perhaps from the biological treatment system impoundments); seasonal changes associated with rainfall; local agricultural uses.

Cedar Chemical Corporation - Monitoring Well Analysis Report Summary

Date	Well	pH	Sp. Cond.	TOH	TOC
Oct-89	1	6.71	1850	0.774	4.62
Dec-89	1	7.28	1900	0.657	4.96
Feb-90	1	7.38	2000	0.648	5.72
Apr-90	1	6.94	2000	0.988	4.76
Oct-89	2	6.58	860	0.037	2.06
Dec-89	2	7.42	900	0.071	2.42
Feb-90	2	7.81	850	0.020	2.74
Apr-90	2	7.18	800	0.167	1.93
Oct-89	3	6.39	4500	6.570	38.40
Dec-89	3	6.66	3250	4.165	25.32
Feb-90	3	6.70	3500	4.370	24.97
Apr-90	3	6.43	4500	6.890	36.01
Oct-89	4	6.82	2800	1.840	10.10
Dec-89	4	7.42	2500	1.780	9.72
Feb-90	4	7.49	2900	2.062	12.57
Apr-90	4	7.32	2600	2.059	11.72
Oct-89	6	7.56	1100	0.081	3.64
Dec-89	6	7.77	1000	0.273	19.34
Feb-90	6	8.00	1100	0.053	22.80
Apr-90	6	7.69	1100	0.089	13.56
Oct-89	6A	7.76	700	0.201	2.32
Dec-89	6A	7.52	700	0.035	2.37
Feb-90	6A	7.71	760	0.062	2.81
Apr-90	6A	7.46	775	0.072	2.94
Oct-89	6B	7.33	3500	39.100	85.90
Dec-89	6B	7.46	3100	31.500	84.70
Feb-90	6B	7.37	3900	44.000	19.99
Apr-90	6B	7.23	3000	33.900	71.82
Oct-89	6C	7.43	2100	50.800	78.70
Dec-89	6C	7.54	2100	44.800	74.80
Feb-90	6C	7.07	2100	12.200	101.80
Apr-90	6C	7.04	2000	24.400	66.63
Oct-89	7	7.62	840	0.602	7.50
Dec-89	7	7.83	850	0.979	8.77
Feb-90	7	8.08	960	3.500	14.03
Apr-90	7	7.65	1500	7.280	10.36
Minimum		6.39	700	0.020	1.93
Maximum		8.08	4500	50.800	101.80

TOH VS CONDUCTIVITY

Regression Output:

Constant -2.66097
 Std Err of Y Est 13.88724
 R, R Squared 0.445283 0.198276
 No. of Observations 36
 Degrees of Freedom 34

X Coefficient(s) 0.005964

Std Err of Coef. 0.002056

TOC VS CONDUCTIVITY

Regression Output:

Constant 0.937909
 Std Err of Y Est 26.60908
 R, R Squared 0.466432 0.217559
 No. of Observations 36
 Degrees of Freedom 34

X Coefficient(s) 0.012116

Std Err of Coef. 0.003940

TOH VS TOC

Regression Output:

Constant -0.91977
 Std Err of Y Est 9.659551
 R, R Squared 0.782376 0.612112
 No. of Observations 36
 Degrees of Freedom 34

X Coefficient(s) 0.403380

Std Err of Coef. 0.055069

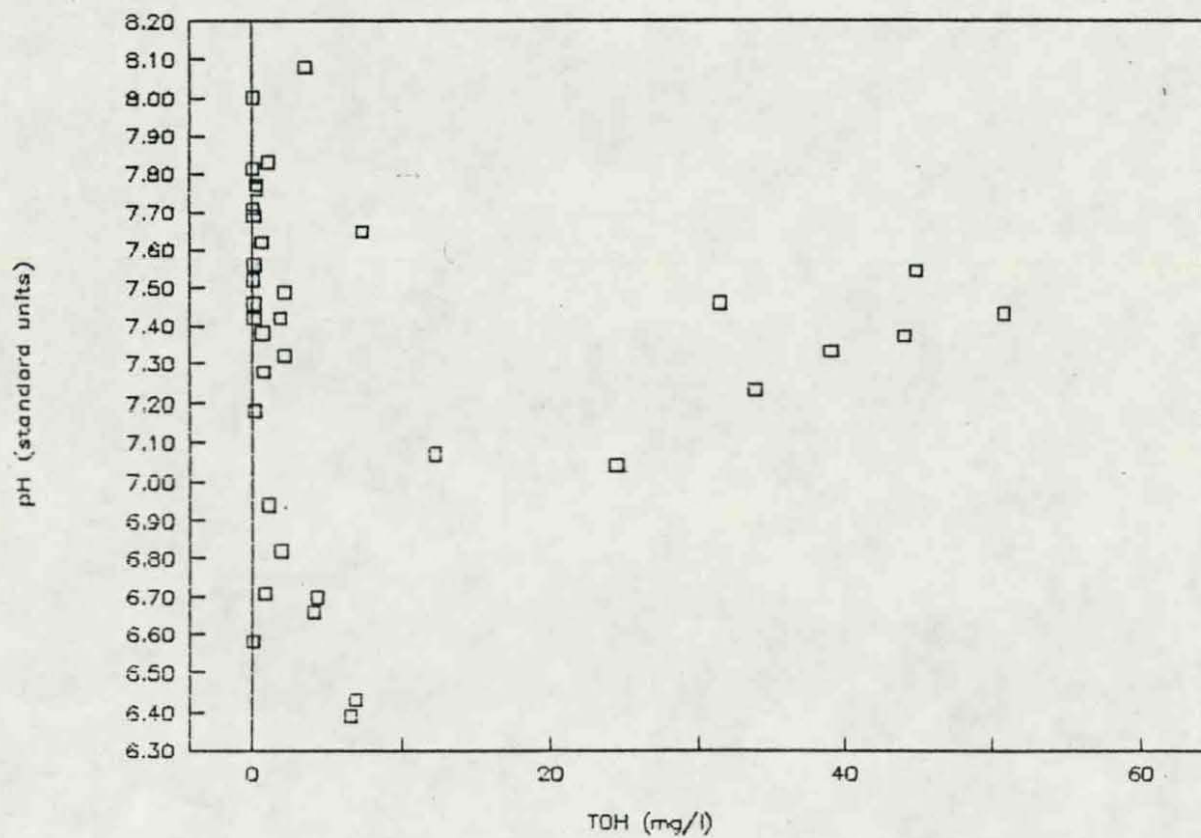
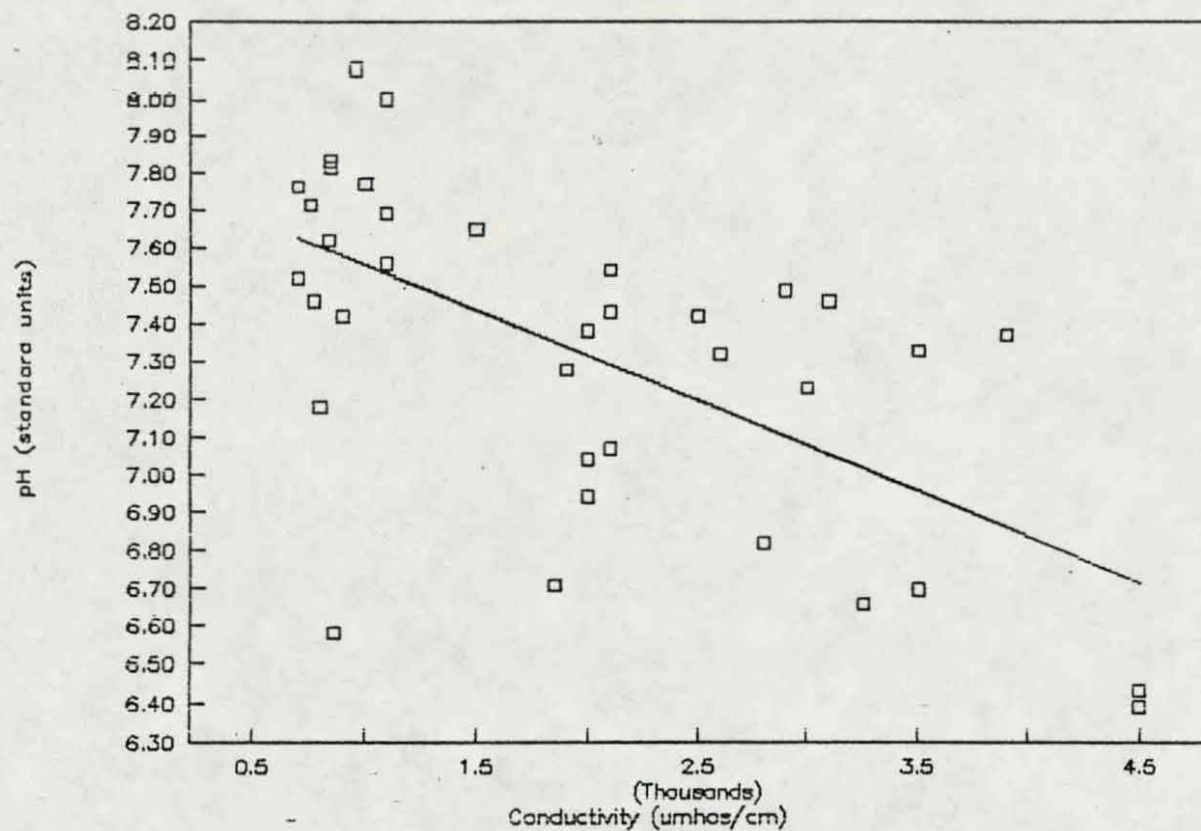
PH VS CONDUCTIVITY

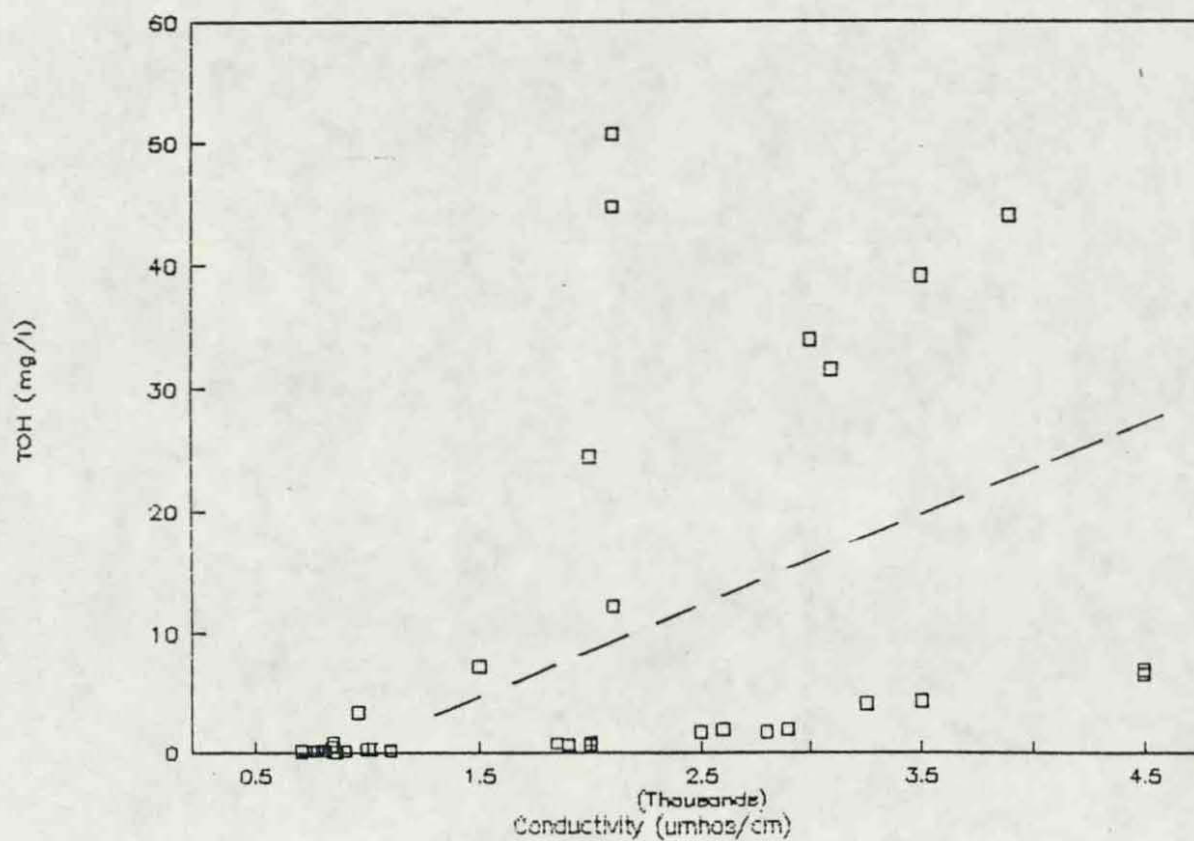
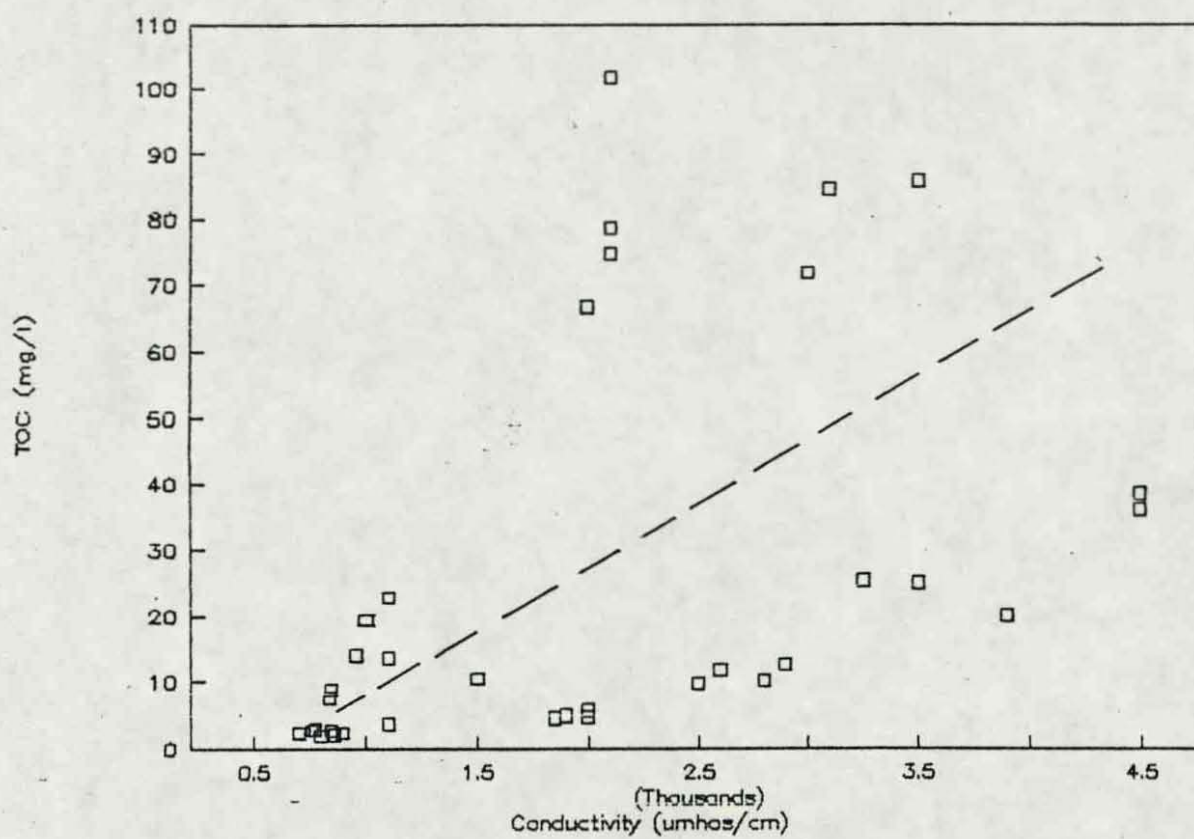
Regression Output:

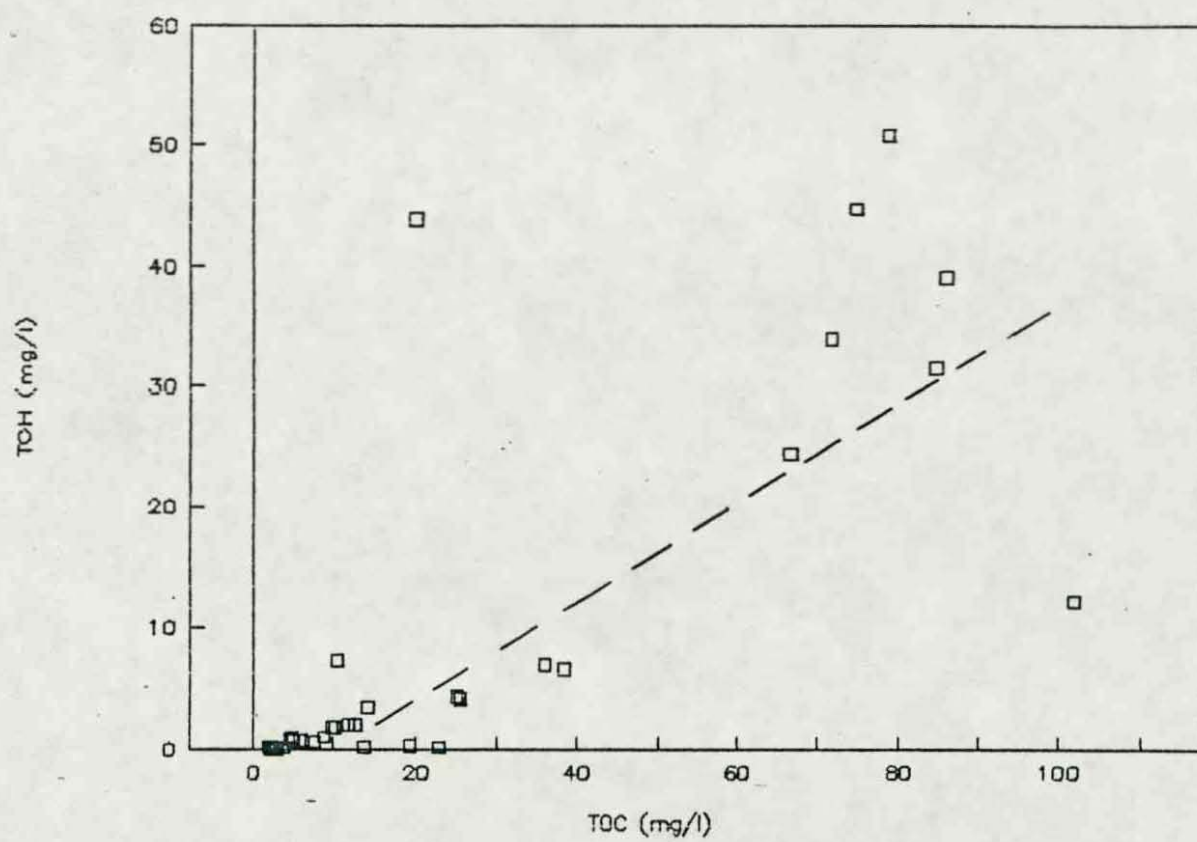
Constant 7.793157
 Std Err of Y Est 0.344945
 R, R Squared 0.624893 0.390491
 No. of Observations 36
 Degrees of Freedom 34

X Coefficient(s) -0.00023

Std Err of Coef. 0.000051

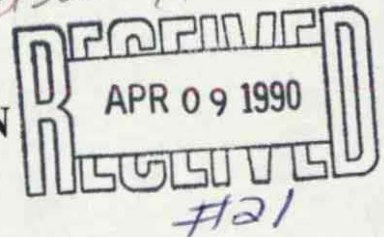






CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348



REPLY TO: P. O. BOX 2749
WEST HELENA, AR 72390
(501) 572-3701

April 6, 1990

Mike Bates
Arkansas Department of Pollution Control & Ecology
8001 National Drive
P.O. Box 9583
Little Rock, AR 72209

CSN: 540068 Permit No.
Media: Air, Water, Solid, Hazardous, Superfund, UST
Sort: Permit, Compliance

Re: Excavation

Dear Mike:

To follow up on our phone conversation, we have uncovered what we believe to be a small drum burial area. We were digging a trench as part of a construction project on our stormwater drainage system. At approximately 6 feet below grade a drum was uncovered. Continued digging of the area uncovered approximately eight drums in a six foot long, four foot wide trench down to a depth of twelve feet below grade. An area map is attached.

Approximately 250 cubic feed of contaminated soil has been removed. We have ordered a hazardous waste bin from Rollins ChemPak, Inc. for containment of the excavated material. It is currently covered with plastic sheets and does not pose a threat from rainwater run off. The excavated area was filled with fresh dirt and construction continued. There is no analytical data as of now. The material appears to be emulsifier and dinitro compounds.

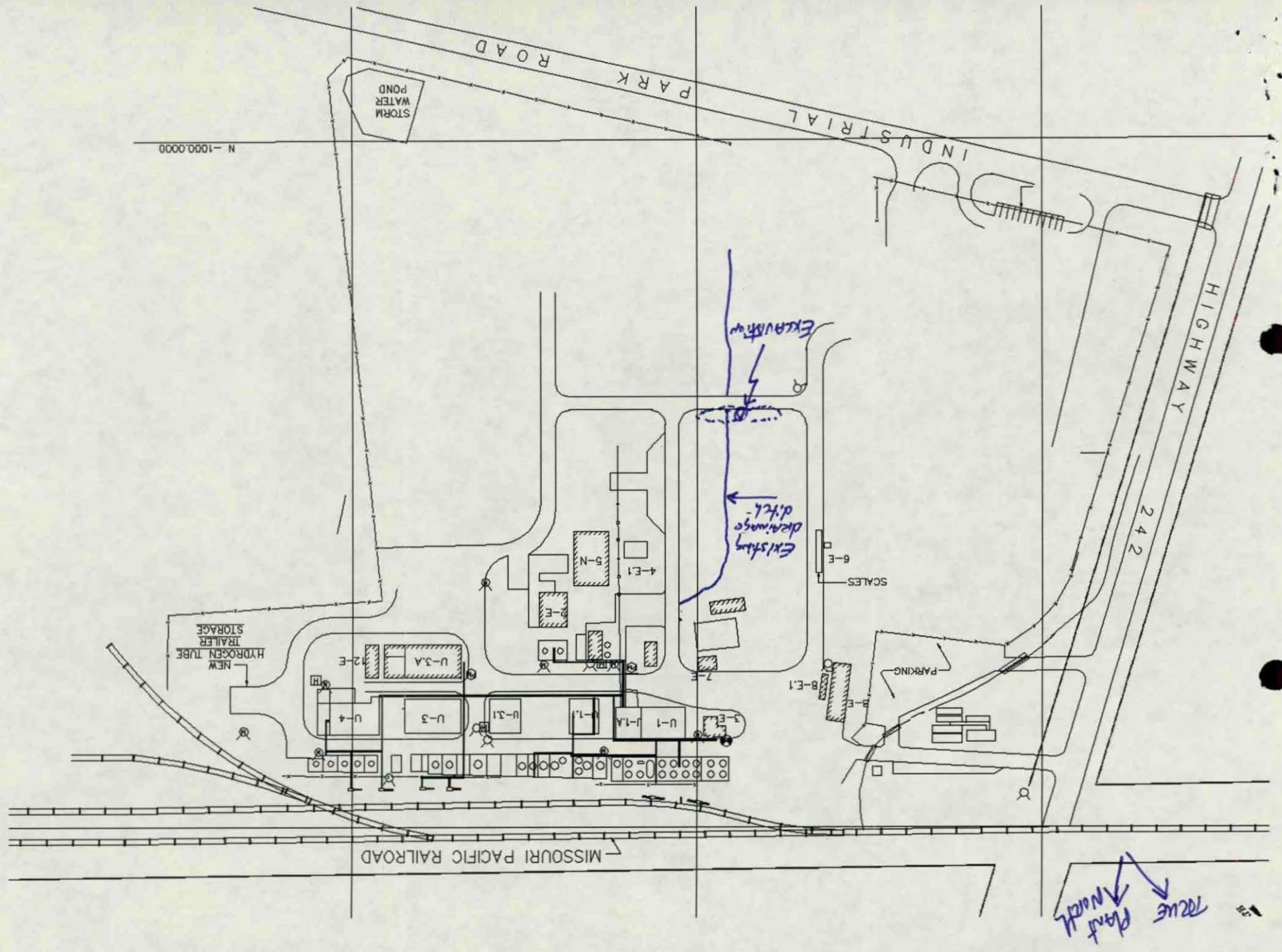
We will have the firm of Woodward-Clyde involved in additional investigation. We would like to have your assistance and guidance in cleaning up this area.

Sincerely,

Joe E. Porter

Joe E. Porter
Environmental Engineer

cc: J.H. Miles
T.J. Lodice
J.R. Tomblin



N - 1000,0000

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P. O. BOX 2749
WEST HELENA, AR 72390
(501) 572-3701

April 6, 1990

Mike Bates
Arkansas Department of Pollution Control & Ecology
8001 National Drive
P.O. Box 9583
Little Rock, AR 72209

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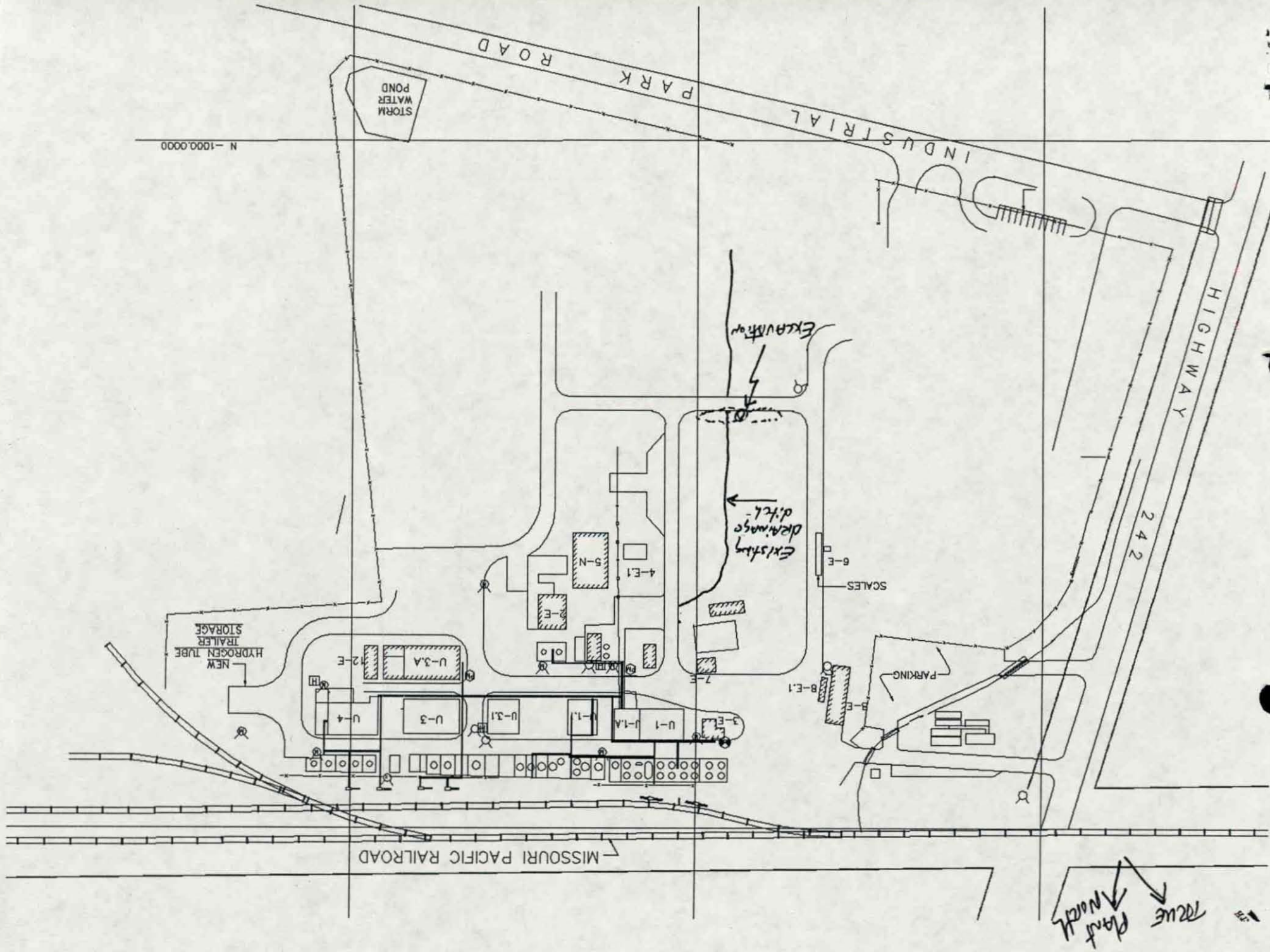
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Sincerely,



Joe E. Porter
Environmental Engineer

cc: J.H. Miles
T.J. Lodice
J.R. Tomblin



04-06-90 11:16 AM FROM CEDAR CHEMICAL CORP

P01/03

CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390
(501) 572-3731 • Fax No. 501-572-3735TO: Arkansas Department of Pollution
Control & Ecology

ATTENTION: Mike Bates

FAX NO: 501-562-4632

FROM: Joe E. Porter

DATE: April 6, 1990

NO. OF PAGES: 2 + cover

MESSAGE

Per our conversation. Thanks for the help!

J Porter

CSN: 540068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:RECEIVED
APR 9 1990
#13

04-06-90 11:16 AM FROM CEDAR CHEMICAL CORP

P02/03

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P. O. BOX 2749
WEST HELENA, AR 72390
(501) 572-3701

April 6, 1990

Mike Bates
Arkansas Department of Pollution Control & Ecology
8001 National Drive
P.O. Box 9583
Little Rock, AR 72209

Re: Excavation

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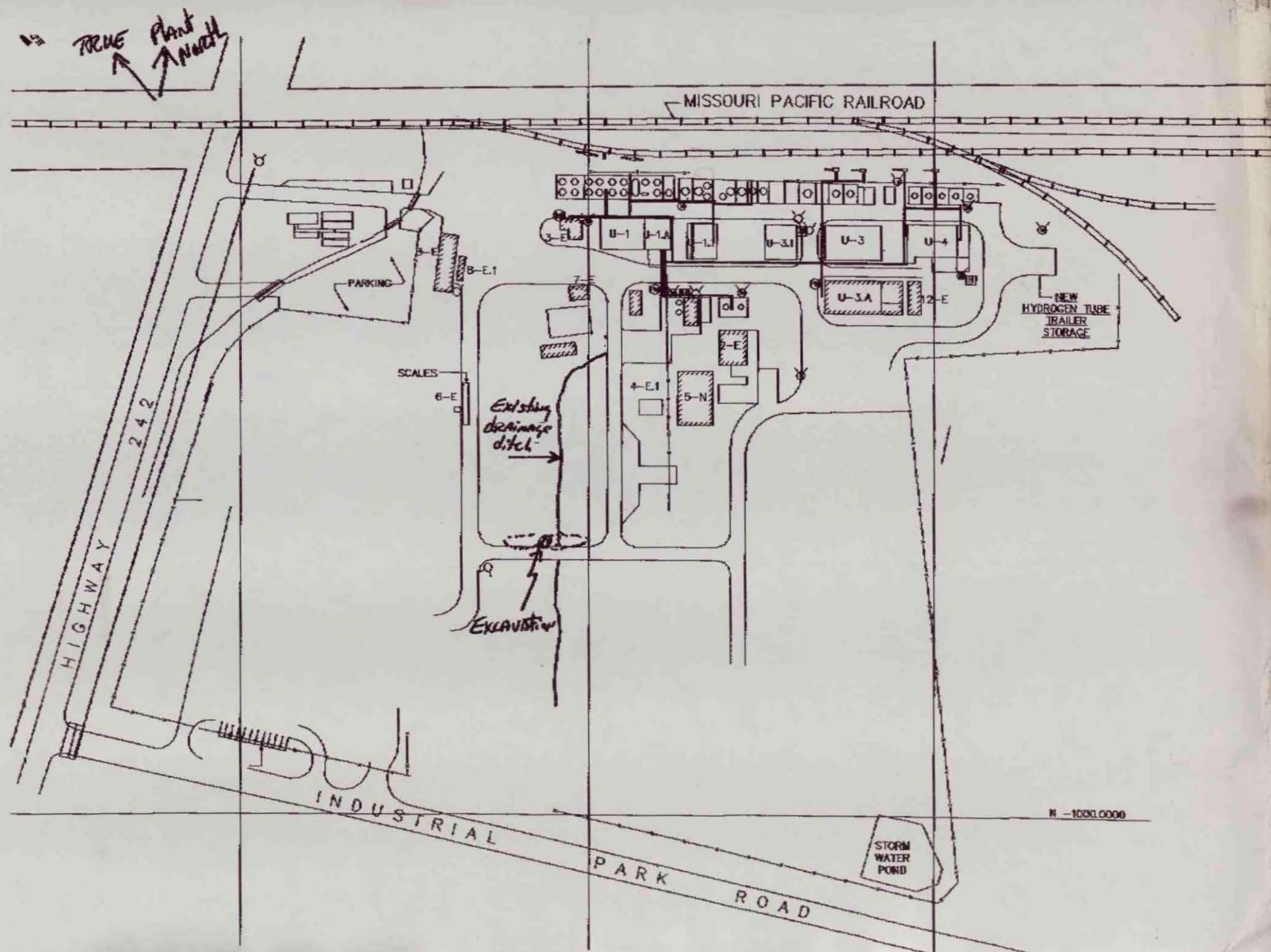
Sincerely,



Joe E. Porter
Environmental Engineer

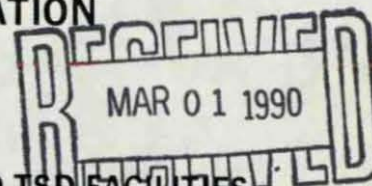
cc: J.H. Miles
T.J. Lodice
J.R. Tomblin

04-06-90 11:16 AM FROM CERAM CHEMICAL CORP



FORM IC IDENTIFICATION AND CERTIFICATION

PART I

BPS
12-10-90
✓

THIS FORM MUST BE COMPLETED BY ALL GENERATORS AND TSD FACILITIES

THIS SITE GENERATES LESS THAN 220 POUNDS OF HAZARDOUS WASTE PER CALENDAR MONTH,
AND IS CONDITIONALLY EXEMPT.

Section I:

A. Site name Cedar Chemical Corporation		B. EPA identification number ARD 990 660 649 ✓	
C. Physical location address Hwy 242 South			
D. City West Helena	E. County Phillips	F. State AR	G. Zip code 72390

Section II:

A. _____ Mark here if mailing address is same as physical address.

B. Mailing address
P O Box 2749

C. City West Helena	D. State AR	E. Zip code 72390
-------------------------------	-----------------------	-----------------------------

Section III:

Print Company contact:

A. Last name Porter	First name Joe E.
-------------------------------	-----------------------------

B. Title Environmental Engineer	C. Telephone 501-572-3701
---	-------------------------------------

Section IV:

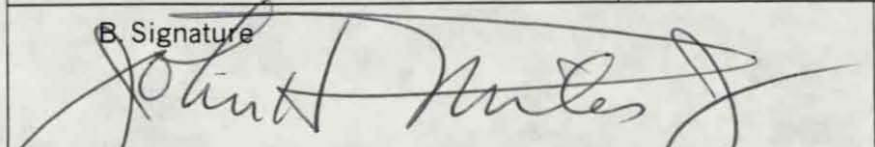
Print Standard Industrial Classification Code:

1. 2869 2. 2879 3. _____ 4. _____ 5. _____

CNS: 540068 Permit No. _____
 Media: Air, Water, Solid, Hazardous
 Sort: Permit, Compliance, Legal, Misc.

92

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. (Print) Last name Miles	First name John H.	Title Plant Manager
B. Signature 		Date 2/27/90

FORM IC: IDENTIFICATION AND CERTIFICATION

PART II



A. Name change: NA previous name: _____ new name: _____
B. Ownership change: NA
C. Date facility closed: NA
D. Waste stream change: NA
E. Process change: NA
F. Generation status of this site for this reporting year: <input checked="" type="checkbox"/> Category 1 (generated 2200 pounds or more per calendar month) <input type="checkbox"/> Category 2 (generated between 220 pounds per calendar month) <input type="checkbox"/> Category 3 (generated less than 220 pounds per calendar month)
G. Was hazardous waste generated as a one-time event during the reporting year? (spill clean-up, remedial actions, one-time elimination of on-site waste) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, briefly describe actions taken. <u>A one-time waste of D007 was created in a change in</u> <u>refridgeration system. Changed from calcium chloride with</u> <u>chromate inhibitor to ethylene glycol.</u>
H. List total amount of hazardous waste generated during the reporting year: <p style="text-align: center;">18,570,400 pounds</p>
I. List total amount of hazardous waste carried over from the previous year that was shipped in the reporting year: <p style="text-align: center;">-0-</p>

FORM WR: FACILITY ACTIVITY REPORT
PART I

Section I:

<p>A. Did this site TSD on-site in RCRA-regulated units: ____ Yes <input checked="" type="checkbox"/> No If yes, briefly describe the TSD methods used.</p>
<p>B. Was TSD for excluded wastes: ____ Yes <input checked="" type="checkbox"/> No If yes, briefly describe the TSD method used. _</p>
<p>C. Did TSD occur in exempt units: <input checked="" type="checkbox"/> Yes ____ No If yes, briefly describe the type of units. Treatment: Elementary neutralization Alkaline Chlorination in totally enclosed systems.</p>
<p>D. Has this TSD site notified for closure: <input checked="" type="checkbox"/> Yes ____ No Date of closure <u>December 12, 1988</u></p>
<p>E. Is this TSD site in closure/<u>(post-closure:)</u> <input checked="" type="checkbox"/> Yes ____ No</p>
<p>F. List the following cost estimates: Facility closure <u>NA</u> Post-closure monitoring and maintenance <u>NA</u></p>

**FORM WR: FACILITY ACTIVITY REPORT
PART I**

Section II:

A. List storage amounts: NA - No storage more than 90 days.

	Handling Codes	Amounts	Units of Measure
January 1, 1989		0	
December 31, 1989		0	

B. Describe briefly this site's groundwater monitoring activity and attach monitoring report for surface impoundment, landfill, or land treatment.

Not applicable for this report. However, a groundwater monitoring plan has been initiated.

NA - No waste accepted from off-site.

[illegible]

This form should be completed by facilities who generated hazardous waste on-site and treated, stored, or disposed of the hazardous waste on-site. Do NOT include waste shipped off-site. Do NOT include waste received from an off-site generator.

A. Site EPA Identification Number ARD 990 660 649
Name Cedar Chemical Corporation
address _____
city _____ state _____ zip _____

[illegible]



STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

PHONE: (501) 562-7444

January 24, 1990

Mr. Joe Porter
Cedar Chemical Corporation
P. O. Box 2749
Highway 242 South
West Helena, AR 72390

CSN: 59.0068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

Dear Mr. Porter:

The 1988 Hazardous Waste Annual Report submitted by Cedar Chemical has been reviewed.

The report does not have an original signature and date on page 2. Form GS, page 8, lists shipments to LAD000777201; the Department manifest system does not reflect these shipments. Also, the annual report lists more shipments than the manifest printout.

I have enclosed printouts showing the information on file with the Department manifest system.

You must provide an amended annual report to my attention within fifteen (15) days of receipt of this letter. If you have any questions, please let me know.

Sincerely,

Vicky Renfrow
Administrative Assistant II
Hazardous Waste Division

FORMS: GENERATOR ACTIVITY REPORT

Page 5

Gs 1 of 4

Section I: Generator identification

A. EPA identification number ARD 990 660 649
 B. Name CEDAR Chemical Corporation ✓

Section II: Transporter identification

A. EPA identification number MOD 006 968 101
 name Union-Pacific Railroad
 address 210 North 13th Street
 city St. Louis state MO zip 63103

Section III: TSD facility identification

A. EPA identification number TXD 097 673 149
 name EMPAK, Inc.
 address 2759 Battleground Road
 city Deer Park state TX zip 77536

B. Amount of hazardous waste generated on-site and treated, stored, or disposed of on-site: _____

Form WR, Part III must also be completed if on-site TSD took place.

Section IV: Waste identification

Waste description	SIC	WFC	SC	EPA WC	AMOUNT	UOM	D	OC	ST
Waste, Flammable Liquid UN 1993	2879	B102	A37	D001	17,121,000	P		A	M134
RQ Toluene									

TR1-3
00108-28-3
for Toluene

A. EPA identification number ARD 990 660 649
B. Name CEDAR Chemical Corporation

A. EPA identification number TXD 000 742 304
name GIBRALTAR WASTEWATERS, INC
address 3800 Stone Road
city Kilgore state TX zip 75662

A. EPA identification number TXD 000 742 304
name Gibraltar Chemical Resources Deep Well
address PO Box 248 - Hwy 155
city Winona state TX zip 75792

Form WR, Part III must also be completed if on-site TSD took place.

[illegible]

A. EPA identification number ARD 990 660 649
B. Name CEDAR Chemical Corporation

A. EPA identification number ~~TX~~ ARD 981 513 385
name Lee's Trucking Service
address Route 6 Box 5
city El Dorado state AR zip 71730

A. EPA identification number TXD 000 742 304
name Gibraltar Chemical Resources Deep Well
address P O Box 248 - Hwy 155
city Winona state TX zip 75792

Form WR, Part III must also be completed if on-site TSD took place.

[illegible]

FORM GS: GENERATOR ACTIVITY REPORT

Page 5

GS 494

Section I: Generator identification

A. EPA identification number ARD 990 660 649
 B. Name CEDAR Chemical Corporation

Section II: Transporter identification

A. EPA identification number ARD 981 513 385
 name Lee's Trucking Service
 address Route 6 Box 5
 city El Dorado state AR zip 71730

Section III: TSD facility identification

A. EPA identification number LAD 000 778 514
 name Rollins Environmental Services of Louisiana, Inc.
 address Rt 2 Box 1200 - Gracie Lane - Bayou Sorrel
 city Plaquemine state LA zip 70764

B. Amount of hazardous waste generated on-site and treated, stored, or disposed of on-site: _____

Form WR, Part III must also be completed if on-site TSD took place.

Section IV: Waste identification

Waste description	SIC	WFC	SC	EPA WC	AMOUNT	UOM	D	OC	ST
Hazardous Waste, Liquid, NOS, NA 9189	2869	B119	A69	D007	159,880	P		A	M134
EPA Code D007									

B119 - Aqueous ~~salt~~ Calcium Chloride solution ~~containing~~ containing Chromium inhibitor
 A69 - Changeover to Ethylene Glycol

closed loop

PS 1 of 9

Page 2

FORM PS

Site name <u>Cedar Chemical Corporation</u>	
address <u>P O Box 2749 - Hwy 242 South</u>	
<u>West Helena, AR 72390</u>	
Site EPA identification number <u>ARD990 660 649</u>	
Section I:	
A. Waste treatment, disposal, recycling system description Elementary neutralization of propionic acid. This material is usually in the ph range of 2 to 4. This is neutralized to a range of 7 to 9 prior to transfer to the biological treatment system. (NPDES).	
B. System type <u>M 1 2 1</u>	C. Regulatory status <u>0 2</u>
D. Operational status <u>0 1</u>	E. Unit types <u>0 1</u> <u> </u>
Comments: Anhydrous Ammonia is used for neutralization. This also provides necessary nitrogen value to the biological system.	

~~98%~~
98% of
this
time,
this is
non-haz

*page 8 of instructions, form PS:
totally enclosed treatment units
are not reported on Form PS*

FORM PS

Section II:

A. 1989 influent quantity

Total 5 5 0 0 0 0 UOM 1 Density 8.5RCRA - 0 (1) X lbs./gallon (2) — sg

B. Maximum operational capacity

Total 2 0 0 0 0 0 0RCRA D K

C. 1989 liquid effluent quantity

Total 5 5 0 0 0 0 UOM 1 Density 8.5RCRA -0 (1) X lbs./gallon (2) — sg

D. 1989 solid/sludge residual quantity

Total -0 UOM — Density —RCRA -0 (1) — lbs./gallon (2) — sg

E. Limitations on capacity

(1) 0 9 (2) — (3) —F. Commercial availability code 1G. Percent capacity commercially available NA %

FORM PS**Section III:**

A. Planned changes in maximum operational capacity ___ YES (continue to box B) <u>X</u> NO (Form is complete; stop here)
B. New maximum operational capacity Total _____ UOM _____ RCRA _____
C. Planned year of change _____
D. Future commercial availability code _____
E. Percent future capacity commercially available _____ %

FORM PS

Site name <u>Cedar Chemical Corporation</u>	
address <u>P O Box 2749 - Hwy 242 South</u>	
<u>West Helena, AR 72390</u>	
Site EPA identification number <u>ARD 990 660 649</u>	
Section I:	
A. Waste treatment, disposal, recycling system description Alkaline chlorination in totally enclosed treatment systems. This form applies to several process systems which use sodium hypochlorite solution to treat residual cyanide or sulfide compounds.	
B. System type <u>M 0 7 5</u>	C. Regulatory status <u>0 2</u>
D. Operational status <u>0 1</u>	E. Unit types <u>0 1</u> _____
Comments: Aqueous process streams which have cyanide or sulfide present are treated with sodium hypochlorite. After laboratory analysis demonstrating the absence of cyanide or sulfide, the solution is treated with sodium sulfite to remove excess hypochlorite and pH is adjusted where necessary. These treatments take place in process units.	

FORM PS

Section II:

A. 1989 influent quantity			
Total	D	K	UOM _____ Density _____
RCRA	-0		(1) _____ lbs./gallon (2) _____ sg
B. Maximum operational capacity			
Total	D	K	
RCRA	-0		
C. 1989 liquid effluent quantity			
Total	D	K	UOM _____ Density _____
RCRA	-0		(1) _____ lbs./gallon (2) _____ sg
D. 1989 solid/sludge residual quantity			
Total	-0		UOM _____ Density _____
RCRA	-0		(1) _____ lbs./gallon (2) _____ sg
E. Limitations on capacity			
(1)	0	9	(2) _____ (3) _____
F. Commercial availability code _____ ¹			
G. Percent capacity commercially available _____ <u>NA</u> %			

FORM PS

Section III:

A. Planned changes in maximum operational capacity ___ YES (continue to box B) <u>X</u> NO (Form is complete; stop here)
B. New maximum operational capacity Total _____ UOM _____ RCRA _____
C. Planned year of change _____
D. Future commercial availability code _____
E. Percent future capacity commercially available _____ %

closed Sept 15 7 of 9

FORM PS

Site name <u>Cedar Chemical Corporation</u>	
address <u>P O Box 2749 - Hwy 242 South</u>	
<u>West Helena, AR 72390</u>	
Site EPA identification number <u>ARD 990 660 649</u>	
Section I:	
A. Waste treatment, disposal, recycling system description Elementary neutralization of spent scrubber medium. This form applies to several process systems which use sodium hydroxide as a scrubber liquor.	
B. System type <u>M 1 2 1</u>	C. Regulatory status <u>0 2</u>
D. Operational status <u>0 1</u>	E. Unit types <u>0 1</u> <u> </u>
Comments: Scrubber systems are considered spent when sodium hydroxide concentration reaches 1 to 3%. At this point, the solution is above the maximum level of pH 12.5. Therefore the solution is manually neutralized to below pH 10. A specific scrubber may only operate for a portion of the year. Records are not maintained on all systems as to volumes. They may also be used to neutralize process materials.	

FORM PS

Section II:

A. 1989 influent quantity

Total _____ D K _____ UOM _____ Density _____

RCRA _____ -0 _____ (1) _____ lbs./gallon (2) _____ sg

B. Maximum operational capacity

Total _____ D K _____

RCRA _____ -0 _____

C. 1989 liquid effluent quantity

Total _____ D K _____ UOM _____ Density _____

RCRA _____ -0 _____ (1) _____ lbs./gallon (2) _____ sg

D. 1989 solid/sludge residual quantity

Total _____ -0 _____ UOM _____ Density _____

RCRA _____ -0 _____ (1) _____ lbs./gallon (2) _____ sg

E. Limitations on capacity

(1) 0 9 (2) _____ (3) _____F. Commercial availability code 1G. Percent capacity commercially available NA %

FORM PS**Section III:**

A. Planned changes in maximum operational capacity ____ YES (continue to box B) <u>X</u> NO (Form is complete; stop here)
B. New maximum operational capacity Total _____ UOM _____ RCRA _____
C. Planned year of change _____
D. Future commercial availability code _____
E. Percent future capacity commercially available _____ %

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:

SITE NAME

CEDAR Chemical Corporation

EPA ID NO.

AR0990660649



U.S. ENVIRONMENTAL
PROTECTION AGENCY

1989 Waste Minimization Report

FORM

IC

IDENTIFICATION AND
CERTIFICATION

INSTRUCTIONS: Read the detailed instructions beginning on page 6 of the 1989 Hazardous Waste Report booklet before completing this form.

SEC. I Site name and location address. Complete items A through H. Check the box ☒ in items A, B, D, E, F, G, and H if same as label; if different, enter corrections. If label is absent, enter information. Instruction page 6.

A. EPA ID No.

Same as label ☐ or ☐

B. Site/company name

Same as label ☐ or ☐

C. Has the site name associated with this EPA ID changed since 1987?

☐ 1 Yes☒ 2 No

D. Street name and number. If not applicable, enter industrial park, building name or other physical location description.

Same as label ☐or ☐

Hwy 242 South -

E. City, town, village, etc.

Same as label ☐or ☐

West Helena

F. County

Phillips

G. State

Same as label ☐or ☐

AR

H. Zip Code

Same as label ☐or ☐

712390-1111

SEC. II Mailing address of site. Instruction page 6.

A. Is the mailing address the same as the location address?

☐ 1 Yes (SKIP TO SEC. III)☒ 2 No (COMPLETE SEC. II)

B. Number and street name of mailing address

P.O. Box 2749

C. City, town, village, etc.

West Helena

D. State

AR

E. Zip Code

712390-1111

SEC. III Name, title, and telephone number of the person who should be contacted if questions arise regarding this report. Instruction page 6.

A. Please print: Last name

Porter

First name

Joe

M.I.

E.

B. Title

Environmental
Engineer

C. Telephone

501 572-3701

Extension

1111

SEC. IV Enter the Standard Industrial Classification (SIC) Code that describes the principal products, group of products, produced or distributed, or the services rendered at the site's physical location. Enter more than one SIC Code only if no one industry description includes the combined activities of the site. Instruction page 7.

A.

2869

B.

2879

C.

1111

D.

1111

SEC. V I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. Number of form pages submitted

Form IC 1 2

Form WM 002

B. Please print: Last name

Miles

First name

John

M.I.

H.

C. Title

Plant Manager

D. Signature

E. Date of signature

012 27 90

MO.

DAY

YR.

Page 1 of 2

Sec. VI Waste Minimization Activity during 1988 or 1989

A. Did this site begin or expand a source reduction activity during 1988 or 1989?
Instruction page 8

- ☒ 1 Yes
☐ 2 No

B. Did this site begin or expand a recycling activity during 1988 or 1989?
Page 8

- ☐ 1 Yes
☒ 2 No

C. Did this site conduct a source reduction or recycling opportunity assessment during 1988 or 1989?
Page 8

- ☒ 1 Yes
☐ 2 No

D. What factors have limited this site from initiating new source reduction activities during 1988 or 1989?
(CHECK ALL THAT APPLY)
Page 8

- ☐ 01 No factors have limited new source reduction activities.
☐ 02 Insufficient capital to install new source reduction equipment or implement new source reduction practices.
☒ 03 Lack of technical information on source reduction techniques, applicable to my specific production processes.
☒ 04 Source reduction is not economically feasible: cost savings in waste management or production will not recover the capital investment.
☒ 05 Concern that product quality may decline as a result of source reduction.
☒ 06 Technical limitations of the production processes.
☐ 07 Permitting burdens.
☐ 08 Other (SPECIFY IN COMMENTS)

E. What factors have limited this site from initiating new on-site or off-site recycling activities during 1988 or 1989?
(CHECK ALL THAT APPLY)
Page 8

- ☐ 01 No factors have limited new recycling activities.
☐ 02 Insufficient capital to install new recycling equipment or implement new recycling practices.
☐ 03 Lack of technical information on recycling techniques applicable to this site's specific production processes.
☐ 04 Recycling is not economically feasible: cost savings in waste management or production will not recover the capital investment.
☐ 05 Concern that product quality may decline as a result of recycling.
☐ 06 Requirements to manifest wastes inhibit shipments off site for recycling.
☐ 07 Financial liability provisions inhibit shipments off site for recycling.
☐ 08 Technical limitations of product processes inhibit shipments off site for recycling.
☐ 09 Technical limitations of production processes inhibit on-site recycling.
☐ 10 Permitting burdens inhibit recycling.
☐ 11 Lack of permitted off-site recycling facilities.
☐ 12 Unable to identify a market for recyclable materials.
☐ 13 Other (SPECIFY IN COMMENTS)

Comments:

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:

SITE NAME

CEDAR Chemical Corporation

EPA ID NO.

ARD990660649



U.S. ENVIRONMENTAL
PROTECTION AGENCY

1989 Waste Minimization Report

FORM
WM

WASTE MINIMIZATION

INSTRUCTIONS: Read the detailed instructions beginning on page 9 of the 1989 Waste Minimization Report booklet before completing this form.

Sec. I

A. Waste description
Instruction Page 11

Aqueous process stream from organic chemical manufacturing;
contains methyl mercaptan (reactive sulfide)

B. EPA hazardous waste code
Page 11

D,0,0,3

C. State hazardous waste code
Page 11

D. SIC code
Page 11

28,69

E. Source code
Page 11

A,8,9

F. Form code
Page 12

B,1,1,1

G. Origin
Page 12 Code 1

System type M

H. TRI constituent
Page 12

3

I. CAS numbers
Page 13

1. 0,0,0,7,4-9,3-1 2. NA

3. NA 4. NA 5. NA

Sec. II

A. Quantity generated in 1988
Instruction Page 13

9,5,3,1,8,0

B. Quantity generated in 1989
Page 13

1,9,0,5,6,0

C. UOM
Page 13

P

D. Density
Page 14

8.5

☐ 1 lbs/gal ☐ 2 sg

E. Was this waste recycled in 1989?
Page 14

☐ 1 Yes (CONTINUE TO BOX F)
☒ 2 No (SKIP TO SEC. III)

F. On-site recycling
Page 14

Quantity recycled on site in 1989

G. Off-site recycling
Page 14

Quantity recycled off site in 1989

Sec. III

A. Activity
Page 14

W,5,1 W,5,2

W,1,1 W,1,1

B. Other effects
Page 14

☐ 1 Yes

☒ 2 No

C. Quantity recycled in 1989 due to new activities
Page 14

NA

D. Activity/Production Index
Page 15

1.8

E. Source Reduction Quantity
Page 16

1,5,2,5,0,0,0

Comments:

I.E. Aqueous process stream

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:

SITE NAME

CEDAR Chemical Corporation

EPA ID NO.

AR.D.9.9.0.6.6.0.6.4.9



U.S. ENVIRONMENTAL
PROTECTION AGENCY

1989 Waste Minimization Report

FORM
WM

WASTE MINIMIZATION

INSTRUCTIONS: Read the detailed instructions beginning on page 9 of the 1989 Waste Minimization Report booklet before completing this form.

Sec. I	A. Waste description Instruction Page 11 <u>Aqueous process stream from organic chemical manufacturing; contains product which is AN organic mixture containing sulfide (reactive)</u>			
B. EPA hazardous waste code Page 11 <u>D.0.03</u>		C. State hazardous waste code Page 11		
D. SIC code Page 11 <u>2869</u>	E. Source code Page 11 <u>A89</u>	F. Form code Page 12 <u>B111</u>	G. Origin Page 12 Code <u>1</u> System type <u>M</u>	
H. TRI constituent Page 12 <u>3</u>	I. CAS numbers Page 13 <u>MIXTURE</u> 1. <u> </u> - <u> </u> - <u> </u> 2. <u> </u> - <u> </u> - <u> </u> 3. <u> </u> - <u> </u> - <u> </u> 4. <u> </u> - <u> </u> - <u> </u> 5. <u> </u> - <u> </u> - <u> </u>			

Sec. II	A. Quantity generated in 1988 Instruction Page 13 <u>368820</u>	B. Quantity generated in 1989 Page 13 <u>0</u>	C. UOM Page 13 <u>P</u>	D. Density Page 14 <u>8.5</u> <input checked="" type="checkbox"/> 1 lbs/gal <input type="checkbox"/> 2 kg	E. Was this waste recycled in 1989? Page 14 <input type="checkbox"/> 1 Yes (CONTINUE TO BOX F) <input checked="" type="checkbox"/> 2 No (SKIP TO SEC. III)
F. On-site recycling Page 14 Quantity recycled on site in 1989 <u> </u>			G. Off-site recycling Page 14 Quantity recycled off site in 1989 <u> </u>		

Sec. III	A. Activity Page 14 <u>W51</u> <u>W52</u> <u>W</u> <u>W</u>	B. Other effects Page 14 <input type="checkbox"/> 1 Yes <input checked="" type="checkbox"/> 2 No	C. Quantity recycled in 1989 due to new activities Page 14 <u>NA</u>	D. Activity/Production Index Page 15 <u>2.4</u>	E. Source Reduction Quantity Page 16 <u>885000</u>
----------	--	---	--	---	--

Comments:

I.E. Aqueous process stream
I.I. Product: Allyl-N-Butyltrithio CARBONATE



**Grubbs, Garner
& Hoskyn, Inc.,
Consulting Engineers**

10501 Stagecoach Road P.O. Box 5239 Little Rock, AR 72215 501-455-2536 Fax: (501) 455-4137

January 2, 1990
LR89-237

CSN: 590068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

Cedar Chemical Corporation
P. O. Box 2749
West Helena, AR 72390

Attention: Mr. Joe Porter

RE: Monitoring Well Installation
Cedar Chemical Company
West Helena, Arkansas

Gentlemen:

Attached are the logs of the monitoring wells installed for the Cedar Chemical Company in West Helena, Arkansas. The well locations are shown on Plate 1. Soil stratigraphy and results of field tests are summarized on the log forms, Plates 2 through 10. The well completion diagrams are shown on the right-hand portion of the log forms.

The monitoring wells were installed using a potable water supply. Decontamination procedures were used between wells. The wells were each developed using an engine-driven compressor.

If you have any questions regarding this data or installation procedures, please contact us.

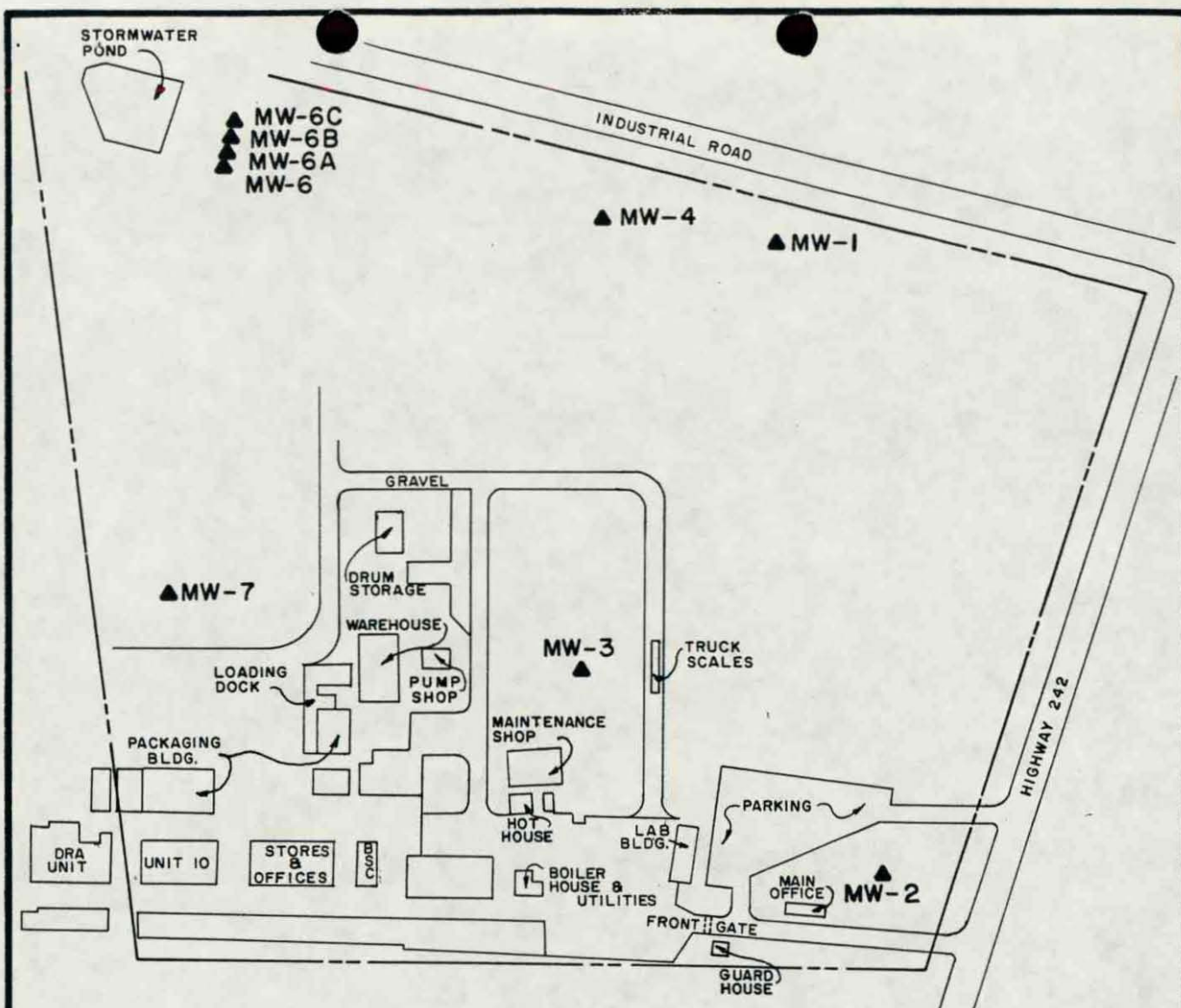
Very truly yours,

GRUBBS, GARNER & HOSKYN, INC.

Richard E. Ackley, P.E.

REA/jj

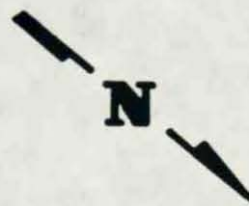
Copies Submitted: Cedar Chemical Corporation (3)
Attn: Mr. Joe Porter



MONITOR WELL LOCATIONS

CEDAR CHEMICAL COMPANY
WEST HELENA, ARKANSAS

SCALE
1" = 170'



LOG OF MONITOR WELL NO. 1

Cedar Chemical Company
West Helena, Arkansas

TYPE: Auger to 13.5 ft & Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT						
						0.2 0.4 0.6 0.8 1.0 1.2 1.4						
						PLASTIC LIMIT	WATER CONTENT, %	LIQUID LIMIT				
						10	20	30	40	50	60	70
			SURF. EL: 196.47									
			Loose tan fine sandy silt									
			Very stiff tan silty clay									
			Very stiff tan silty clay									
5			Stiff gray silty clay									
			-w/rootlets									
			-tan and gray below 6 ft									
			-tan and light gray below 8.5 ft									
10												
15												
20			-wet at 20 ft									
			-firm at 20 to 21 ft									
25												
30			-gray below 30.5 ft									
			-tan and light gray and firm below 34.5 ft									
35												

Protective Cover

Cement Grout

2-inch diameter stainless steel riser

Bentonite Seal

Filter Sand

Slotted Screen (0.010" Slots)

COMPLETION DEPTH: 35 ft
DATE: 8/14/89

DEPTH TO WATER IN BORING: 20 ft
DATE: 8/20/89

LOG OF MONITOR WELL NO. 2

Cedar Chemical Company
West Helena, Arkansas

TYPE: Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL (Based on Boring 2)	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT						
						PLASTIC LIMIT	WATER CONTENT, %	LIQUID LIMIT				
									0.2 0.4 0.6 0.8 1.0 1.2 1.4			
SURF. EL: 197.65						10	20	30	40	50	60	70
5			Stiff to very stiff tan clayey silt			Protective Cover →						
						Cement Grout →						
10			Stiff brown and tan silty clay			2-inch diameter stainless steel riser →						
15			Firm brown clayey silt									
20			Firm to soft gray and brown silty clay to very silty clay w/ferrous stains and rootlets -Gray below 24 ft			Bentonite Seal →						
25			Dense tan and gray silty fine sand -w/gray sandy silt seams at 29 to 30 ft			Slotted Screen (0.010" Slots) →						
						Filter Sand →						
30												
35												

COMPLETION DEPTH: 35 ft

DATE: 8/15/89

DEPTH TO WATER
IN BORING:

DATE:

LOG OF MONITOR WELL NO. 3

Cedar Chemical Company
West Helena, Arkansas

TYPE: Auger to 13.5 ft & Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT			PLASTIC LIMIT	WATER CONTENT, %	LIQUID LIMIT
						0.2	0.4	0.6			
SURF. EL: 197.50											
0			Stiff tan silty clay -w/gravel on surface -slight odor								
5											
10											
15			Stiff to firm gray silty clay -w/dark gray stains and odor -tan and gray without odor below 18.5 ft								
20											
25											
30			Loose to medium dense gray sandy silt								
35			-tan and gray silty clay below 34.5 ft								
			Dense dark gray sand								

COMPLETION DEPTH: 35 ft
DATE: 8/16/89

DEPTH TO WATER
IN BORING:

DATE:

Form 108-6(74) Job No. 58-237

LOG OF MONITOR WELL NO. 4

Cedar Chemical Company
West Helena, Arkansas

TYPE: Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL (Based on Boring 4) SURF. EL: 196.99	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT			PLASTIC LIMIT	WATER CONTENT, %	LIQUID LIMIT
						0.2	0.4	0.6			
5			Stiff tan clayey silt -w/some silty clay pockets								
10			Stiff gray silty clay -w/ferrous stains and nodules -tan and gray below 8 ft								
15			Stiff tan and gray clayey silt -w/some silty clay pockets and seams								
20			-firm and wet below 18 ft								
25			-gray below 24 ft								
30			-more clayey below 32 ft								
35											

COMPLETION DEPTH: 35 ft
DATE: 8/14/89

DEPTH TO WATER IN BORING: _____
DATE: _____

LOG OF MONITOR WELL NO. 6

Cedar Chemical Company
West Helena, Arkansas

TYPE: Auger to 2 ft & Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT							
						0.2	0.4	0.6	0.8	1.0	1.2	1.4	
						PLASTIC LIMIT			WATER CONTENT, %			LIQUID LIMIT	
						10	20	30	40	50	60	70	
SURF. EL: 196.59													
			Stiff brown clayey silt -w/odor										Protective Cover
5			Very stiff gray and tan silty clay -w/ferrous stains				⊗			⊗			Cement Grout
10			Stiff to firm greenish gray silty clay -w/odor					⊗					2-inch diameter stainless steel riser
15			-tan and gray below 15.5 ft				⊗						
20			Firm to stiff tan clayey silt -w/ferrous stains and slight odor				⊗	⊗					
30			-gray below 25 ft				⊗						
40							⊗						
50			Loose to medium dense gray fine sandy silt				⊗						
60			Dense gray fine to coarse sand				⊗						
70			-w/gravel below 65 ft	50/6"									Bentonite Seal
80			-more gravel below 70 ft	40/4"									Filter Sand
				50/5"									Slotted Screen (0.010" Slots)

COMPLETION DEPTH: 80 ft
DATE: 8/9/89

DEPTH TO WATER
IN BORING:

DATE:

LOG OF MONITOR WELL NO. 6A

Cedar Chemical Company
West Helena, Arkansas

TYPE: Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT						
						PLASTIC LIMIT	WATER CONTENT, %	LIQUID LIMIT				
						0.2	0.4	0.6	0.8	1.0	1.2	1.4
						10	20	30	40	50	60	70
			SURF. EL: 196.46									
5			Stiff brown clayey silt -w/odor									
10			Very stiff gray and tan silty clay -w/ferrous stains									
15			Stiff to firm greenish gray silty clay -w/odor -tan and gray below 15.5 ft									
20			Firm to stiff tan clayey silt w/ferrous stains and slight odor -gray below 25 ft									
25												
30												
35												
40												
45			Loose to medium dense gray fine sandy silt									
50												

Protective Cover

Cement Grout

2-inch diameter stainless steel riser

Bentonite Seal

Filter Sand

Slotted Screen (0.010" Slots)

COMPLETION DEPTH: 50 ft
DATE: 8/9/89

DEPTH TO WATER IN BORING: _____
DATE: _____

LOG OF MONITOR WELL NO. 6B

Cedar Chemical Company
West Helena, Arkansas

TYPE: Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT						
						<div style="text-align: center;"> </div>						
						0.2	0.4	0.6	0.8	1.0	1.2	1.4
			SURF. EL: 196.47			PLASTIC LIMIT	WATER CONTENT, %				LIQUID LIMIT	
						10	20	30	40	50	60	70
			Stiff brown clayey silt -w/odor									
5			Very stiff gray and tan silty clay -w/ferrous stains									
10			Stiff to firm greenish gray silty clay -w/odor									
15			-tan and gray below 15.5 ft									
20			Firm to stiff tan clayey silt -w/ferrous stains and slight odor									
25			-gray below 25 ft									
30												

COMPLETION DEPTH: 30 ft
 DATE: 8/9/89

DEPTH TO WATER
 IN BORING:

DATE:

LOG OF MONITOR WELL NO. 7

Cedar Chemical Company
West Helena, Arkansas

TYPE: Auger to 13.5 ft & Wash

LOCATION: See Plate 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT						
						PLASTIC LIMIT	WATER CONTENT, %	LIQUID LIMIT				
			SURF. EL: 196.86			0.2	0.4	0.6	0.8	1.0	1.2	1.4
			Loose tan sandy silt			+	-	-	-	-	-	-
			Loose gray silt w/gravel and odor (yellow tint)									
			Stiff to firm tan silty clay									
5												
10												
15												
			Stiff tan and gray clayey silt									
20												
			Firm tan and gray silty clay w/ferrous stains									
25												
			Stiff gray clayey silt									
30												
			Stiff gray silty clay w/some wood fragments and sand seams									
35												
			Dense gray silty fine sand -less silty fine to medium sand below 40 ft									
40												

Protective Cover

Cement Grout

2-inch diameter stainless steel riser

Bentonite Seal

Filter Sand

Slotted Screen (0.010" Slots)

COMPLETION DEPTH: 42 ft
DATE: 8/19/89

DEPTH TO WATER IN BORING:

DATE:

REC-14 NF
DEC 11 1989
REGISTRATION

34-0068
PERMIT NO. N/A
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO : Mark Simpson, Geologist, R.S.T. Div. JJ
FROM : Jay Justice, Hazardous Waste Chemist, T.S. Div.
DATE : 7-DEC-1989
SUBJECT : Results from analysis on groundwater samples taken
at Cedar Chemical Company on October, 17, 1989.

The groundwater samples taken October 17, 1989, at Cedar Chemical Company located at West Helena have been analyzed for Semivolatile Organics and Total Organic Carbon. The results from these analyses are listed below and are expressed in mg/l.

Well #3

TOC	41
Methoxybenzene (1)	0.02
Dichlorobenzene (1)	0.15
Propanil (1)	0.17

Well #6C

TOC	67
Dichloroanilines (1)	25
Chloroaniline (1)	0.1

Well #6A

TOC	1.5
Phenylaniline (1)	0.025

Field Duplicate
(Well #6C)

TOC	71
Dichloroanilines (1)	25

(1) Denotes a concentration that has been estimated.

cc: Jim Rigg, Geologist II, Groundwater Section
Hazardous Waste Division

CSN: 54 0068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES: #12

RECEIVED
DEC 6 1989

December 4, 1989

To: Sammy Bates
Arkansas Department of Pollution Control & Ecology

Dear Sammy:

I received a telephone call from Terry Perry informing me that our letter had been routed to a different department. However, for your records a copy of our report on contingency plan implementation is attached.

If we can help further please let us know.

Sincerely,

Joe E. Porter

Joe E. Porter

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444

Rec'd Dec 4, 1989

November 27, 1989

Mr. Joe Porter
Cedar Chemical Corporation
P. O. Box 2749
West Helena, AR 72390

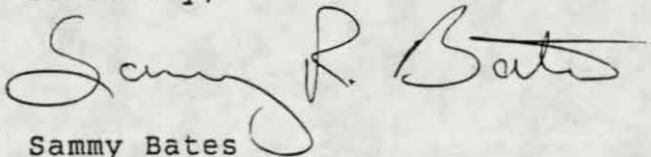
RE: Contingency Plan implementation on September 25, 1989

Dear Mr. Porter:

I have been informed by our emergency coordinator, Terry Perry, of an accident on September 25, 1989, in which Cedar Chemical's contingency plan was implemented. To date, I am not aware of a written report having been submitted to our Department for review. Any facility implementing their contingency plan must submit a written report to this Department within 15 days after the incident as required by 40 CFR 265.56(j) as adopted by the Arkansas Hazardous Waste Management Code.

You must submit a written report within 10 days to this Department regarding the incident in question. If you have already submitted a report, please send me a copy including the date sent.

Sincerely,



Sammy Bates
Hazardous Waste Inspector Supervisor
Hazardous Waste Division

SB/ckh:LTR691

cc: Terry Perry

Cecil

CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390
(501) 572-3701 • Fax No. 501-572-3795

Regional Administrator - Region VI
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Tx. 75202

October 10, 1989

Re: Contingency Plan Implementation
ARD 990 660 649

CSN: 570068 PERMIT NO.
MEDIA: AIR, WATER, SOLID, HAZARDOUS
SORT: PERMIT, COMPLIANCE
FEES:

Dear Sir:

On September 25, 1989 at approximately 5:45 PM (est), the Cedar Chemical Corporation Contingency Plan was implemented. A chemical reactor in our Unit 3 ruptured due to a sudden increase in internal pressure. The rupture resulted in a flash fire which in turn ignited an unknown volume (less than 500 gallons) of 70% methyl alcohol and a nearby office building. The reactor contained final product, methylthiopinacolone oxime (CAS 39195-82-9), with a purity of 96.4% (approximately 14,000 pounds).

The lead operator for the unit sustained 5% third degree and 50% second degree burns. He is currently in very good condition. A second operator sustained a very minor burn, was examined by the hospital emergency room, and released.

Fire in the processing area was secured by plant personnel within the first few minutes before local authorities arrived. Local fire departments then spent approximately 45 minutes controlling the office fire where paper records and insulation were stored. In the first minutes, plant employees also responded with contingency plan actions of securing other operating units, storage tanks, railcars, and emergency callouts.

All contingency plans were carried out as necessary including phone calls to proper authorities, securing plant processes, checks for hazardous waste generation, and securing the plant processes and storage tanks until power could be restored.

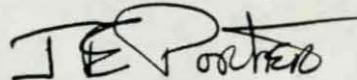
To the best of our knowledge and analysis, hazards to human health and the environment were held to an absolute minimum. Materials released did not result in hazardous wastes. All materials including firewater were contained on the plant site and no significant impact on our NPDES biological treatment system has been observed.

The plant is currently in total operating condition with the

exception of the affected unit. Plans for this units future have not been finalized.

A representative from the Arkansas Department of Pollution Control & Ecology was on-site that very evening for an in-depth examination of the incident and its effects. Representatives from the Arkansas Department of Labor and Occupational Safety & Health Administration made visits in the following days. OSHA's visit extended into the community to verify/clarify reports given in television broadcasts and newspapers.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "J E Porter", with a stylized flourish at the end.

Joe E. Porter
Environmental Engineer

cc: J.H. Miles

c:\Joe\Sep2589.EPA

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444

September 14, 1989

Cedar Chemical
P.O. Box 2749
West Helena, AR 72390

CSN: 540068 Permit No.
Media: Air, Water, Solid, Hazardous, Superfund, UST
Sort: Permit, Compliance

ATTN: Joe Porter

Dear Mr. Porter:

In an effort to coordinate the upcoming sampling and analysis of the recently installed monitoring wells, please furnish me your procedure for sampling the wells and the laboratory that will be analyzing the water samples for TOC and TOX. In addition, please include the schedule that will be followed.

The Department also request that you notify us three days prior to a sampling event to allow us time to prepare sample bottles should we want to split samples with your facility.

Sincerely,

Mark Simpson

Mark Simpson
Geologist II
Hazardous Waste Division

MS/alb:LTR153

F

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444

CERTIFIED MAIL

June 28, 1989

Mr. Joe Porter
Environmental Engineer
Cedar Chemical Corporation
P.O. Box 2749
West Helena, Arkansas 72390

CSN: 54 0068 Permit No.
Media: Air, Water, Solid (Hazardous) Superfund, UST
Sort: Permit, Compliance

Dear Mr. Porter:

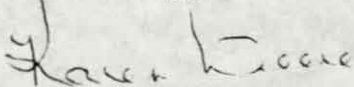
The Department has completed review of your submissions concerning piezometric data and proposed monitoring well locations pursuant to paragraph 10(a) of the Order. The groundwater monitoring program is hereby approved based on the following conditions:

1. The proposed shallow monitoring well for the perched water at boring 6-A should be drilled to a depth of 15 feet with the bottom 5 feet being screened due to the depth to water being below 10 feet for the majority of the year.
2. Screen intervals in wells MW-1, MW-2 and MW-3 should be set at 35 to 25 feet below the surface so that the silty clay material above the sand may be screened.
3. Monitoring wells should be installed in the area around piezometers B-3 and B-3A as groundwater flows in this direction for a significant time during a calendar year. The apparent perched water in the area of B-3 needs to be investigated.
4. Odors were noted during the drilling of several borings. To assist in contaminant identification, an organic vapor detector should be used while drilling to at least a depth of 25 feet below the surface.

Receipt of this letter shall serve to initiate implementation of the groundwater monitoring plan in accordance with paragraph 10(c) of the Order.

If you have any questions in the above matter, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Karen Deere".

Karen Deere
Manager, Enforcement Branch
Hazardous Waste Division

KD/alb:LTR76

cc: Mark Simpson

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO : Karen Deere; Manager, Enforcement Branch
FROM : Mark Simpson; Geologist II *ms*
DATE : 2-JUN-1989
SUBJECT : Cedar Chemical

CSN: 540068
Media: Air, Soil, Water
Sort: Permit Compliance, Hazardous, Superfund, UST

I have completed my review of Cedar Chemical's piezometric data and proposed monitoring well locations and have these comments.

1. Concerning the wells to monitor the perched water found by boring 6-A the proposed screen interval in the shallow well may be too shallow to be effective for much of the year. Extending the well depth to 15, with the bottom 5 feet being screened may be more effective. The reason for this is that the depth to water is below 10 feet for the majority of the year. The other proposed wells which are intended to be drilled to 50 feet and 30 feet are acceptable.
2. In regards to the proposed monitoring well locations, I agree with locations but not with the screen depth. I would prefer to see the screen interval in wells MW-1 MW-2 MW-3 set at 35 to 25 feet below the surface to have some of the silty clay material above the sand included in the screened interval. Even better, would be to have another well cluster with one well screened above the sand.
3. The monitoring system is void of any wells near the old closed out pits (area north of borings B-3 & B-3A) potentiometric surface maps indicate groundwater movement towards the piezometer B-3 & B3-A for a significant time during a year and would be an excellent location for detecting constituents that may be moving eastward.

Additionally in the area of B-3A there appears to be perched water: this needs to be addressed.

4. During drilling it was noted that an odor existed in boring 3 and boring 6, in boring 3 odor was noted from near surface to about 25 feet. It is not known if the boring B-3A had odors or not. Boring 6 had noticeable odors to 17 feet.

In light of this, I recommend that while drilling the monitoring wells that an organic vapor detector be used at least to a depth of 25 feet below the surface.

JMS/alb:MEMO14

Report 1-30-89
Review 3-10-89

Sammy

CSN: 540068 Permit No.
Media: Air, Water, Solid, Hazardous, Superfund, UST
Sort: Permit, Compliance

RCRA INSPECTION

SITE IDENTIFICATION

Date

E.P.A. ID #

ARD990660649

1-24-89

Site Name

Street (or other identifier)

Cedar Chemical Corporation

P.O. Box 2749

City

State

Zip Code

County Name

West Helena

AR

72390

Phillips

Site Operator Information

Name

Telephone Number

Same

501-572-3701

Street

City

State

Zip Code

Site Description

Chemical manufacturing of pesticides

Type of Ownership

☐ Federal ☐ State ☐ County ☐ Municipal ☒ Private

☒ Generator ☐ Transporter ☐ Treatment ☒ Storage ☐ Disposal

☐ Non-generator ☐ Small-generator ☐ Exempted

INSPECTION INFORMATION

Principal Inspector Information

Name

Title

Sammy R. Bates

Hazardous Waste Inspector

Organization

Telephone No. (area code & No.)

ADPC & E

501-562-7444

Inspection Participants

Joe Porter, Environmental Engineer, 572-3701

CLOSURE VERIFICATION NARRATIVE

Cedar Chemical "clean-closed" two hazardous waste storage units (i.e., tank TB112, and drum storage pad) in accordance with the closure plan submitted to the Department and approved May 24, 1988.

At the time of inspection, the two units were not in use and appeared to be closed in accordance with the approved closure plans.. Mr. Porter stated that both had been closed in accordance with the plan and no substantial problems were encountered. The tank is to be removed from service completely and the container storage pad will be used for hazardous waste storage of less than ninety (90) days.

By "clean-closing" these two units, Cedar Chemical Corporation has effectively closed all of their interim-status storage units.

SB/ckh:CLOSE-CED

Closure

A. Does the facility have a closure plan?

☒ Yes ☐ No

1. Does the plan include:

a. A description of how and when the facility will be partially, then finally closed?

☒ Yes ☐ No

b. An up-to-date estimate of the maximum inventory of wastes in storage and treatment at any time during the life of the facility?

☒ Yes ☐ No

c. A description of decontamination procedures for facility equipment?

☒ Yes ☐ No

d. An estimate of expected year of closure?

☒ Yes ☐ No

2. Does the plan include a schedule for final closure? If yes, does it include:

☒ Yes ☐ No

a. Time estimates for each phase of closure for each area?

☒ Yes ☐ No

b. Total time estimate for closure?

☒ Yes ☐ No

3. Using narrative explanations sheet, give a brief summary of how the facility plans to close each area of hazardous waste management; or attach a copy of the closure plan.

see Department Files.

4. Does the plan address all areas of hazardous waste management?

☒ Yes ☐ No

5. Has the plan been amended as necessary to reflect changes in facility operations or design?

☒ Yes ☐ No

6. Are cost estimates available and modified as necessary? If yes, give latest cost estimate and date of adjustments.

☒ Yes ☐ No

B. Have closure activities begun at the facility?

☒ Yes ☐ No

1. If yes,

a. Was the closure plan submitted to the Regional Administrator at least 180 days prior to beginning these activities?

☒ Yes ☐ No

b. Were all wastes treated or disposed of within 90 days of the final receipt of wastes?

☒ Yes ☐ No

If no, give explanation including waivers or extensions granted by Regional Administrator.

NA Yes _____ No

- c. Do the actual closure activities correspond to those written in the closure plan?

X Yes _____ No

If no, include narrative explanation.

2. Was closure completed within 180 days of receipt of final volume of wastes?

X Yes _____ No

If no, give explanation, including waivers or extensions granted by the Regional Administrator.

NA Yes _____ No

3. At completion, did the facility submit a certification of closure to the Regional Administrator?

X Yes _____ No

If yes, was it signed by both the owner/operator and an independent registered professional engineer?

X Yes _____ No

See attached letter from
Department to Cedar Chemical
approving certification.



STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

1-24-89
page 5 of 7
Cedar Chem.
AR8990660649

PHONE: (501) 562-7444

August 31, 1988

Mr. Joe E. Porter
Environmental Engineer
Cedar Chemical Corporation
P. O. Box 2749
West Helena, AR 72390

540068
CSN: Permit No.
Media: Air, Water, Solid, Hazardous
Sort: Permit, Compliance, Legal, Misc.

RE: Closure Plan
Extension Request

Dear Mr. Porter:

The Department has reviewed the letter dated August 23, 1988, requesting an additional ninety (90) day extension for closure activities.

The Department hereby approves the extension request of ninety (90) days to the original ninety (90) day closure period making the total time for closure a total of 180 days from initial approval. The date of initial approval is May 24, 1988, and all time-frames are based on this starting date.

If you have any questions or concerns, please contact Mr. D. G. Warrick at extension 205.

Sincerely,

Paul Means

Paul Means
Director

DW/ckh:LTR232

cc: Mike Bates, Chief, Hazardous Waste Division
Gary Martin, Manager, Technical Branch, HWD
Derick Warrick, Engineer, Technical Branch, HWD

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

PHONE: (501) 562-7444

1-24-89
page 6 of 7
Cedar Chem.
ARD990660649

December 12, 1988

Mr. Joe Porter
Environmental Engineer
Cedar Chemical Corp.
P. O. Box 2749
West Helena, AR 72390

RE: Cedar Chemical Corp.
Final Closure
Tank and Container Storage


Dear Mr. Porter:

The Department has received correspondence dated November 21, 1988, containing the independent certification required for clean closure in respect to the container storage area and storage tanks, T-B112.

The Department hereby approves the final certification for the container storage area and storage tank T-B112. With this approval, all hazardous waste management units are closed at this facility, resulting in a final closure. The requirements of CAO paragraph 7 are also satisfied.

Cedar Chemical Corp. will be required to comply with 40 CFR 262.34 as per accumulation times of hazardous waste with the container storage area.

Sincerely,


Randall Mathis
Acting Director

DW/ckh:LTR309

cc: Mike Bates, Chief, Hazardous Waste Division
Gary Martin, Manager, Technical Branch, HWD
✓ Karen Deere, Manager, Enforcement Branch, HWD
Derick Warrick, Engineer, Technical Branch, HWD

OFFICIAL PHOTOGRAPH
Arkansas Department of Pollution Control & Ecology

SUBJECT: Drum Storage Pad
LOCATION: Cedar Chemical Company
CITY: W. Helena COUNTY: Phillips STATE: AR
DATE: 1-24-89 TIME: 10:45
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
PHOTOGRAPHER (Sig.): Sandy R. Bates
WITNESS: Joe Porter
CAMERA: Pentax K-1000
FILM TYPE: 35mm ASA: 200 T: 1/ f:
NEGATIVE LOCATION: ADPC&E FILE #:
PROCESSED BY: Wal Mart
PHOTO #: 1 of 3



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Tank TB112
LOCATION: Cedar Chemical Company
CITY: W. Helena COUNTY: Phillips STATE: AR
DATE: 1-24-89 TIME: 10:55
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
PHOTOGRAPHER (Sig.): Sandy R. Bates
WITNESS: Joe Porter
CAMERA: Pentax K-1000
FILM TYPE: 35mm ASA: 200 T: 1/ f:
NEGATIVE LOCATION: ADPC&E FILE #:
PROCESSED BY: Wal Mart
PHOTO #: 2 of 3



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Tank TB112
LOCATION: Cedar Chemical Company
CITY: W. Helena COUNTY: Phillips STATE: AR
DATE: 1-24-89 TIME: 10:58
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
PHOTOGRAPHER (Sig.): Sandy R. Bates
WITNESS: Joe Porter
CAMERA: Pentax K-1000
FILM TYPE: 35mm ASA: 200 T: 1/ f:
NEGATIVE LOCATION: ADPC&E FILE #:
PROCESSED BY: Wal Mart
PHOTO #: 3 of 3



STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

PHONE: (501) 562-7444

December 12, 1988

Mr. Joe Porter
Environmental Engineer
Cedar Chemical Corp.
P. O. Box 2749
West Helena, AR 72390

540068
CSN: Permit No.
Media: Air, Water, Solid, Hazardous
Sort: Permit, Compliance, Legal, Misc.

RE: Cedar Chemical Corp.
Final Closure
Tank and Container Storage

Dear Mr. Porter:

The Department has received correspondence dated November 21, 1988, containing the independent certification required for clean closure in respect to the container storage area and storage tanks, T-B112.

The Department hereby approves the final certification for the container storage area and storage tank T-B112. With this approval, all hazardous waste management units are closed at this facility, resulting in a final closure. The requirements of CAO paragraph 7 are also satisfied.

Cedar Chemical Corp. will be required to comply with 40 CFR 262.34 as per accumulation times of hazardous waste with the container storage area.

Sincerely,

Randall Mathis

Randall Mathis
Acting Director

DW/ckh:LTR309

cc: Mike Bates, Chief, Hazardous Waste Division
Gary Martin, Manager, Technical Branch, HWD
Karen Deere, Manager, Enforcement Branch, HWD
Derick Warrick, Engineer, Technical Branch, HWD

F

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

PHONE: (501) 562-7444

December 2, 1988

CSN: 540068 Permit No.
Media: Air, Water, Solid, Hazardous
Sort: Permit, Compliance, Legal, Misc.

Mr. Joe Porter
Environmental Engineer
Cedar Chemical Corporation
P.O. Box 2749
West Helena, Arkansas 72390

Dear Joe:

RE: Consent Administrative Order LIS 86-027

Department staff have completed review of the hydrogeologic assessment report which was submitted on August 4, 1988, and the groundwater monitoring program which was submitted on September 28, 1988.

Comments on the hydrogeologic assessment report are as follows:

- The structure map on Plate 18 is constructed by using only two data points. This may not be an adequate amount of well control to complete this map. A data point near the middle of the site or additional data from USGS that reinforces this structural map should be provided to the Department.
- The map presented for recommending the monitoring well locations needs to show the approximate location of the three (3) closed and capped lagoons. This must be completed before the proper placement of wells can be determined. The area which Borings 6 and 6A were drilled is an appropriate location for the use of a two-well monitoring cluster locating the screens so as to monitor the perched zone and the uppermost sand interval. Screen depths should also be proposed for each monitoring well location.

Comments on the groundwater monitoring program are as follows:

- The Department concurs with the gathering of water elevation measurements from the present to the end of March 1989 as providing enough data for evaluation of seasonal fluctuations in order to properly locate monitoring wells. It is recommended that the piezometers be measured for water levels at least twice a month with potentiometric surface maps being constructed for each measuring event. Also, the perched water observed in piezometer 6A should be monitored.

- Monitoring well locations should be reevaluated and proposed after all water elevation data has been interpreted.
- The recommended well depths of ten feet below minimum seasonal groundwater elevation are acceptable. The location of MW-4 would be an optimum location for a monitoring station screened at a shallow and medium depth if the potentiometric surface remains basically the same as the map in the submittal monitoring well plan. The location for upgradient well M-1 appears to be appropriate.
- The use of stainless steel for construction of well casings and screens is appropriate for all wells. The ground level and top of casing must be surveyed after installation of each well.

If you have any questions about any of the above comments, please feel free to call Mark Simpson or myself. Otherwise, Cedar should proceed with implementation of the groundwater monitoring program.

Sincerely,



Karen Deere
Enforcement Branch Manager
Hazardous Waste Division

KD:fw:1498

cc: Mark Simpson, ADPC&E

540068

f

CSN: Permit No.

Sort: Permit, Compliance, Legal, Misc.

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ~~ECOLOG~~ ^{Hazardous}

MEMORANDUM

TO : Karen Deere, Enforcement Branch Manager, HWD

FROM : Mark Simpson, Geologist, Hazardous Waste Division *MS*

DATE : November 14, 1988

SUBJECT : Cedar Chemical Groundwater Monitoring Well System

In reference to Cedar Chemical's plan for the installation of a groundwater monitoring system that was submitted September 28, 1988, I concur with the gathering of water elevation measurements from the present to March 1989. This schedule should provide enough data for the evaluation of seasonal fluctuations in order to properly locate monitoring wells that would intercept hazardous constituents in the groundwater during all seasons. Cedar Chemical needs to inform the Department how often the piezometers will be measured for water levels in a month between now and March 1989. I recommend at least twice a month. Potentiometric surface maps should be constructed for each measurement done.

Regarding the monitoring well locations, the locations indicted appear satisfactory, but should remain open to revisions until the all water elevation data has been interpreted, Also, the perched water observed in piezometer 6-A should be monitored.

The recommended well depths of ten feet below minimum seasonal groundwater elevation is acceptable, but the location of MW-4 would be an optimum location for a monitoring station screened at a shallow and medium depth if the potentiometric surface remains basically the same as the map in the submitted monitoring well plan. It also appears that the location for upgradient well MW-1 is an appropriate selection.

For the construction of the wells, stainless steel casing and screens are appropriate for all wells. The ground level and top of casing must be surveyed after installation of each well.

There are items from the hydrogeological study that Cedar Chemical need to address, some of this work and data needed can be done in conjunction with work already started and work that is planned. Comments are as follow:

1. The structure map on Plate 18 is constructed by using only two data points. This may not be an adequate amount of well control to complete this map. A data point near the middle of the site or more data may be available from the US Geological Survey that could reinforce this structural map should be made available to the Department. The values used to construct the map should be present on the map beside the respective well.
2. The map presented for recommending the monitoring well locations needs to show the approximate location of the three (3) closed and capped lagoons. This must be done before the proper placement of groundwater monitoring wells can be done. The area which Borings 6 and 6A were drilled is an appropriate location for the use of a two-well monitoring cluster locating the screens to monitor the perched zone and the uppermost sand interval. Proposed screen depths should also be noted for each proposed monitoring well location.

MS:fw:313

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO : Sammy Bates, Inspector, Hazardous Waste Div.
FROM : Jay Justice, Hazardous Waste Chemist, T.S. JJ
DATE : 27-OCT-1988
SUBJECT : Results from analyses on soil samples taken at Cedar Chemical on August 22, 1988

Six of the seven soil samples taken at Cedar Chemical Company on August 22, 1988, were extracted with an organic solvent and presented to the GC/MS to determine if any semi-volatile organic compounds were present in them. Two of the samples demonstrated that they had some semi-volatile organic compounds present in them. The organic compounds present and their estimated concentrations in the soil are listed below. All concentrations are expressed in mg/kg and reflect the amounts that are expected to be present in the samples if they are completely devoid of moisture. The soil sample that was not analyzed was labeled, "Corner of Hwy 242 and Industrial Park Road".

Southeast corner of storage pad

2,5-Cyclohexadiene-1,4 dione, 2,6-Bis(1,1-Dimethylethyl)	2
Bis (Dimethylethyl) Benzenediol	2
2-Dibenzofuranamine	7
4-Dibenzofuranamine	5

North side of tank TB112

Dichloronitro Benzene	1
Bis(Dimethyl ethyl) Benzenediol	5
1,1'-(2,2-Dichloroethylidene) Bis (4-methoxy) Benzene	95
Diphenyl Sulfone	3000

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Drum storage area
 LOCATION: Cedar Chemical, facing North of drum storage pad
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 9:56
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sam R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 100 T: 1/ f:
 NEGATIVE LOCATION: ADPC/E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 1 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Sample location # 1
 LOCATION: SE corner of drum storage pad at Cedar Chemical
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:00
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sam R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 100 T: 1/ f:
 NEGATIVE LOCATION: ADPC/E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 2 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Sample location # 2
 LOCATION: East center of drum storage pad at Cedar Chemical
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:03
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sam R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 100 T: 1/ f:
 NEGATIVE LOCATION: ADPC/E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 3 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Sample location #3 and 4
LOCATION: West center of drum storage
pad, at Cedar Chemical
CITY: W. Helena COUNTY: Phillips STATE: AR
DATE: 8-22-88 TIME: 10:05
WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]
PHOTOGRAPHER (Sig.): Sunny R. Bates
WITNESS: Terry Perry
CAMERA: Pentax K-1000
FILM TYPE: 35mm ASA: 100 T: 1/ f:
NEGATIVE LOCATION: ADPC&E FILE #:
PROCESSED BY: Wal Mart
PHOTO #: 4 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Sample location #5
LOCATION: NW corner of drum storage
pad at Cedar Chemical
CITY: W. Helena COUNTY: Phillips STATE: AR
DATE: 8-22-88 TIME: 10:08
WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]
PHOTOGRAPHER (Sig.): Sunny R. Bates
WITNESS: Terry Perry
CAMERA: Pentax K-1000
FILM TYPE: 35mm ASA: 100 T: 1/ f:
NEGATIVE LOCATION: ADPC&E FILE #:
PROCESSED BY: Wal Mart
PHOTO #: 5 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Drum storage area
LOCATION: Cedar Chemical, drum
storage area facing south
CITY: W. Helena COUNTY: Phillips STATE: AR
DATE: 8-22-88 TIME: 10:15
WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]
PHOTOGRAPHER (Sig.): Sunny R. Bates
WITNESS: Terry Perry
CAMERA: Pentax K-1000
FILM TYPE: 35mm ASA: 100 T: 1/ f:
NEGATIVE LOCATION: ADPC&E FILE #:
PROCESSED BY: Wal Mart
PHOTO #: 6 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

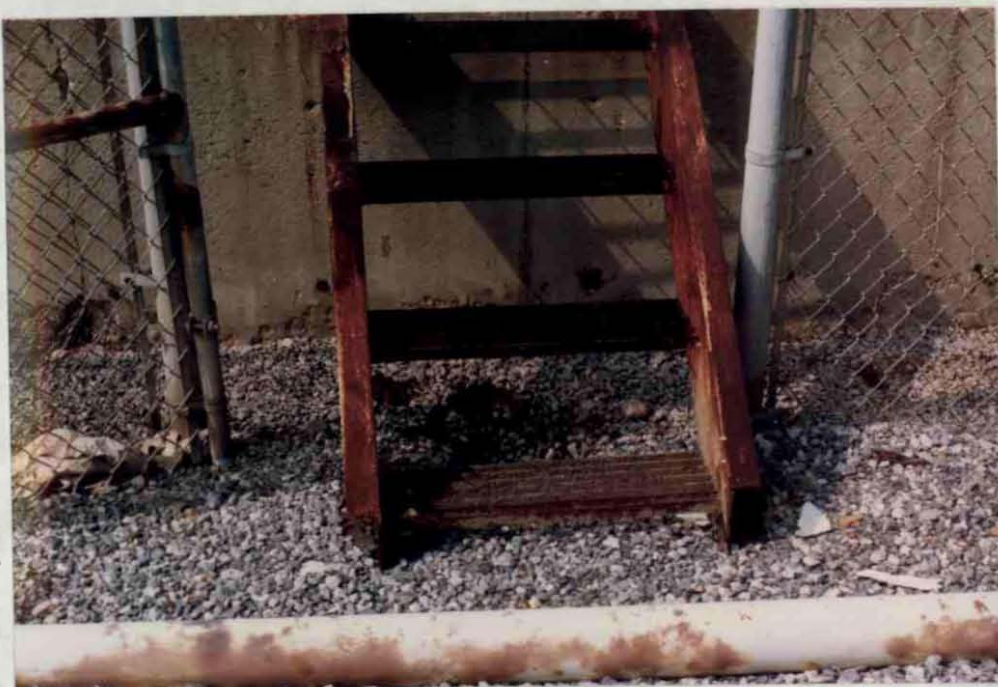
SUBJECT: Sample #6 Cedar Chemical scrap yard
 LOCATION: 50 paces south of drum storage area
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:20
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sam R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 100 T: 1/ f:
 NEGATIVE LOCATION: ADPC4E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 7 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Sample #7 Cedar Chemical
 LOCATION: Center of gate North of Tank #TB112 at Cedar Chemical
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:32
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sammy R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 100 T: 1/ f:
 NEGATIVE LOCATION: ADPC4E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 8 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Sample #8 Cedar Chemical off-site background sample
 LOCATION: Corner of Hwy 242 and Ind. Park Road SW of Cedar Chemical
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:43
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sammy R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 100 T: 1/ f:
 NEGATIVE LOCATION: ADPC4E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 9 of 9



ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO : Sammy Bates, Inspector, Hazardous Waste Div.
FROM : Jay Justice, Hazardous Waste Chemist, T.S. *JJ*
DATE : 27-OCT-1988
SUBJECT : Results from analyses on soil samples taken at Cedar Chemical on August 22, 1988

Six of the seven soil samples taken at Cedar Chemical Company on August 22, 1988, were extracted with an organic solvent and presented to the GC/MS to determine if any semi-volatile organic compounds were present in them. Two of the samples demonstrated that they had some semi-volatile organic compounds present in them. The organic compounds present and their estimated concentrations in the soil are listed below. All concentrations are expressed in mg/kg and reflect the amounts that are expected to be present in the samples if they are completely devoid of moisture. The soil sample that was not analyzed was labeled, "Corner of Hwy 242 and Industrial Park Road".

Southeast corner of storage pad

2,5-Cyclohexadiene-1,4 dione, 2,6-Bis(1,1-Dimethylethyl)	2
Bis (Dimethylethyl) Benzenediol	2
2-Dibenzofuranamine	7
4-Dibenzofuranamine	5

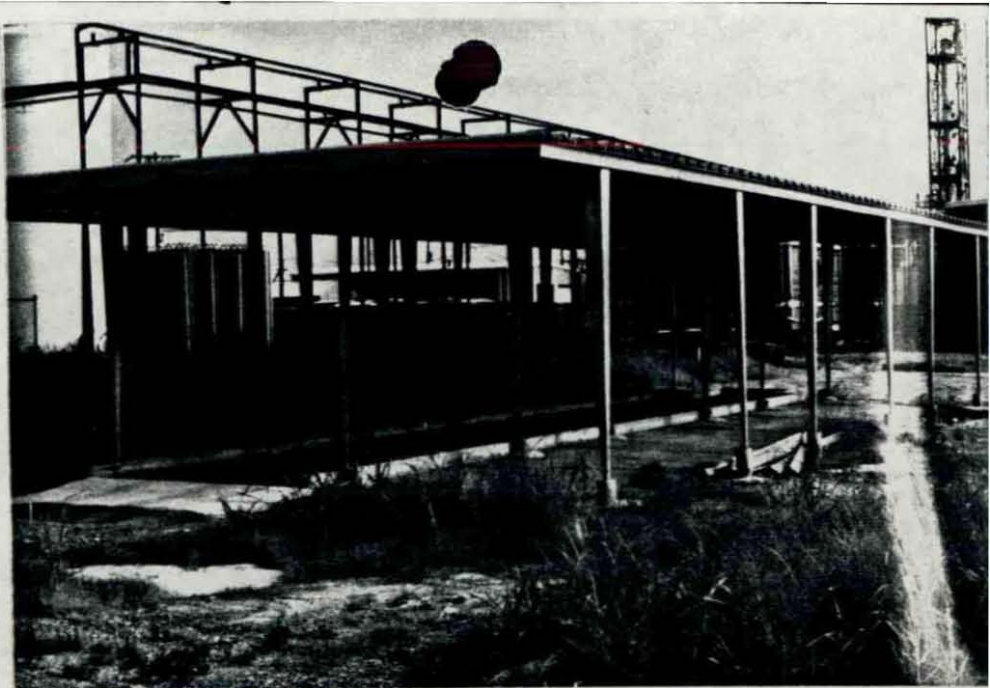
North side of tank TB112

Dichloronitro Benzene	1
Bis(Dimethyl ethyl) Benzenediol	5
1,1'-(2,2-Dichloroethylidene) Bis (4-methoxy) Benzene	95
Diphenyl Sulfone	3000

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Drum storage area
 LOCATION: Cedar Chemical, facing
North of drum storage pad
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 9:56
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sam R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA:100 T:1/ f:
 NEGATIVE LOCATION: ANPCEE FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 1 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Sample location # 1
 LOCATION: SE corner of drum storage
pad at Cedar Chemical
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:00
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sam R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA:100 T:1/ f:
 NEGATIVE LOCATION: ANPCEE FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 2 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Sample location # 2
 LOCATION: East center of drum storage
pad at Cedar Chemical
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:03
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sam R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA:100 T:1/ f:
 NEGATIVE LOCATION: ANPCEE FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 3 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

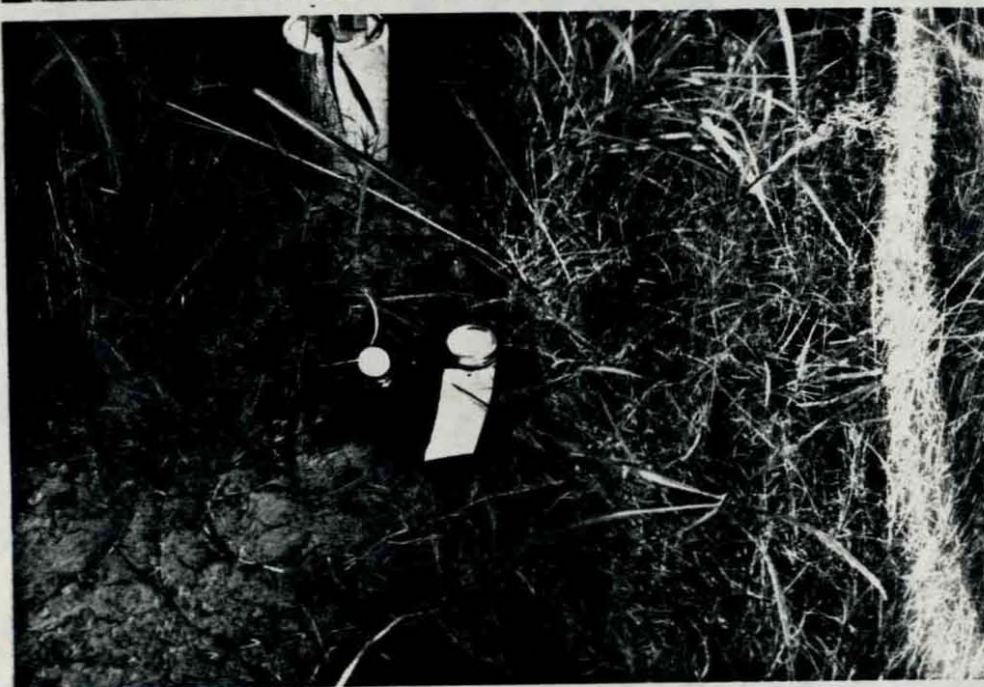
SUBJECT: Sample location #3 and 4
 LOCATION: West center of drum storage
pad, at Cedar Chemical
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:05
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sam R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 100 T: 1/ f:
 NEGATIVE LOCATION: ADPC&E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 4 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

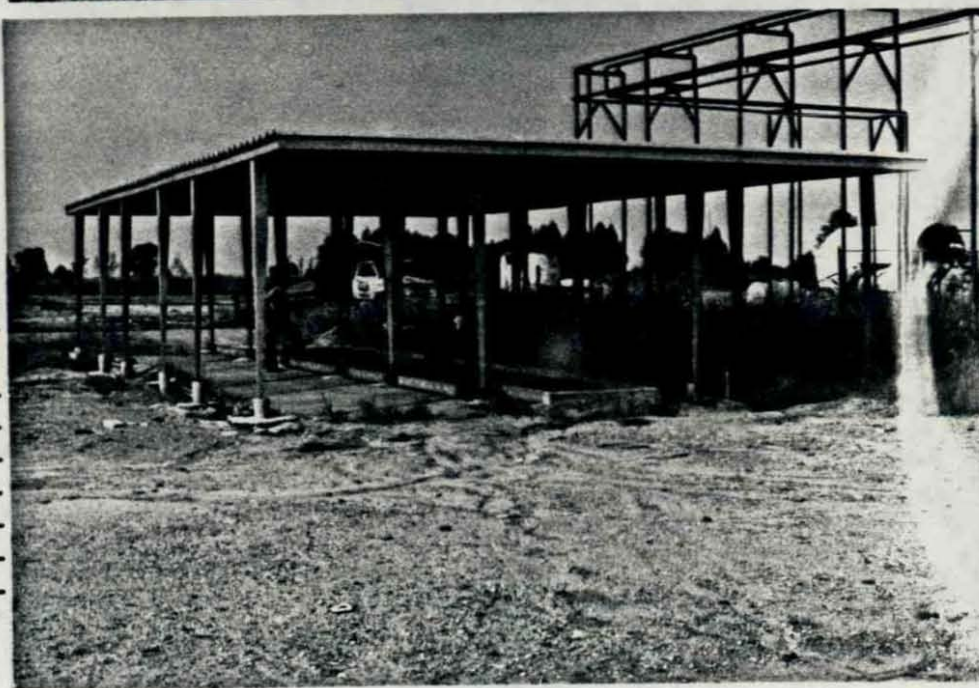
SUBJECT: Sample location #5
 LOCATION: NW corner of drum storage
pad, at Cedar Chemical
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:08
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sam R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 100 T: 1/ f:
 NEGATIVE LOCATION: ADPC&E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 5 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Drum storage area
 LOCATION: Cedar Chemical, drum
storage area facing south
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:15
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sam R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA: 100 T: 1/ f:
 NEGATIVE LOCATION: ADPC&E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 6 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

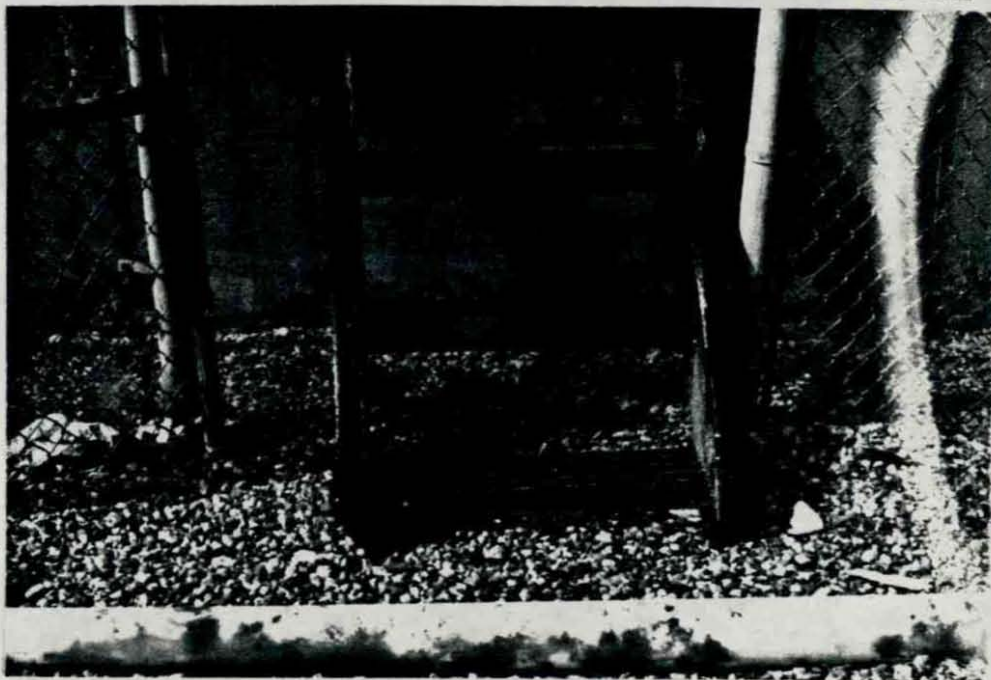
SUBJECT: Sample #6
 LOCATION: 50 paces south of drum storage area
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:20
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sammy R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA:100 T:1/ 1 f: 1
 NEGATIVE LOCATION: ADPC&E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 7 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

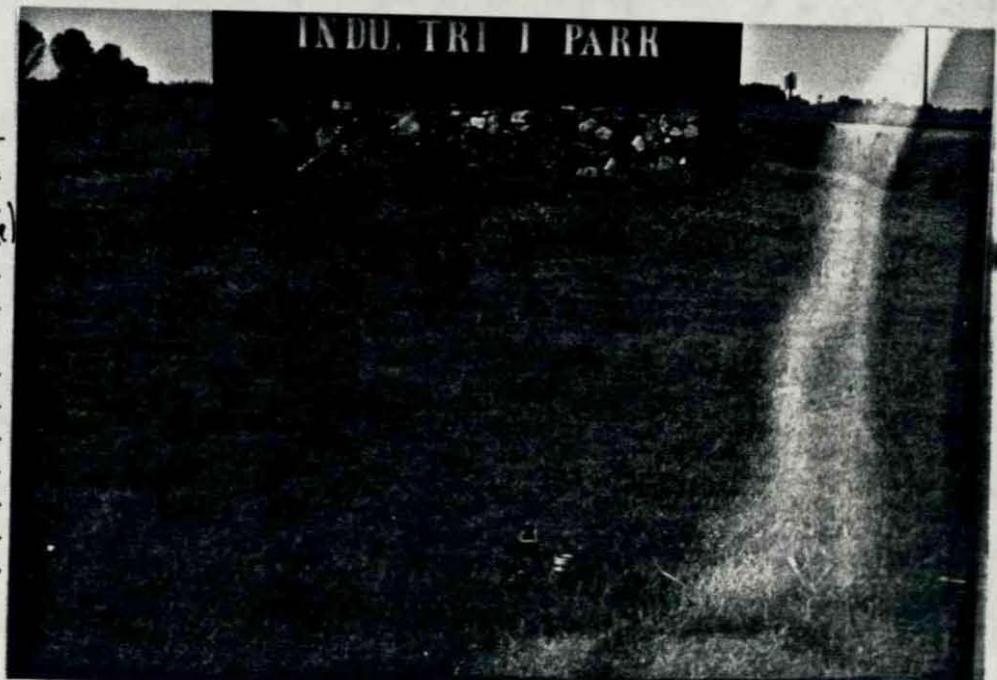
SUBJECT: Sample #7, Cedar Chemical
 LOCATION: Center of gate North of Tank #TB112 at Cedar Chemical
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:32
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sammy R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA:100 T:1/ 1 f: 1
 NEGATIVE LOCATION: ADPC&E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 8 of 9



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Cedar Chemical off-site
 LOCATION: Sample #8, background sample
 LOCATION: Corner of Hwy 242 and Ind. Park Road SW of Cedar Chemical
 CITY: W. Helena COUNTY: Phillips STATE: AR
 DATE: 8-22-88 TIME: 10:43
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)
 PHOTOGRAPHER (Sig.): Sammy R. Bates
 WITNESS: Terry Perry
 CAMERA: Pentax K-1000
 FILM TYPE: 35mm ASA:100 T:1/ 1 f: 1
 NEGATIVE LOCATION: ADPC&E FILE #:
 PROCESSED BY: Wal Mart
 PHOTO #: 9 of 9



540068

F

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

CSN: Permit
Media: Air, Water, Solid, Hazardous
Sort: Permit, Compliance, Legal, Misc.

MEMORANDUM

TO : Karen Deere, Enforcement Branch Manager, HWD

FROM : Mark Simpson, Geologist, Hazardous Waste Division *MS*

DATE : October 7, 1988

SUBJECT : Review of Cedar Chemical's Hydrogeological Study

After review of the study, I have noted some concerns on the proposed monitoring well locations. The areas discussed should be relatively simple to correct. Please comment on my observations and let me know how you want to respond to this study.

1. Regarding the permeability of Stratum III as referenced on Page 7 states the basal stratym has an anticipated coefficient of permeability is 1.0×10^{-7} cm/sec. The section Results and Conclusions have coefficient of permeability estimated by using falling head slug test having a much better permeability value for the same interval. Anticipating permeabilities is not acceptable. The permeability of basal stratum must be determined by lab or field test. Additionally, the estimated permeability for the interval tested in piezometer #6 indicates the continuing layer has not been defined.
2. The structure map on Plate 18 is constructed by using only two data points. This may not be an adequate amount of well control to complete this map. A data point near the middle of the site or more data may be available from the US Geological Survey that could reinforce this structural map should be made available to the Department. The valves used to construct the map should be present on the map beside the respective well.
3. The map presented for recommending the monitoring well locations needs to show the approximate location of the three (3) closed and capped lagoons. This must be done before the proper placement of groundwater monitoring wells can be done. The area which Borings 6 and 6A were drilled is an appropriate location for the use of a two-well monitoring cluster locating the screens to monitor the perched zone and the uppermost sand interval. The map should also clarify which of the proposed wells will be the upgradient well. Proposed screen depths should also be noted for each proposed monitoring well location.

FY 1988 FACILITY STATUS SHEET

1.a. EPA ID: AR079101216191

2.a. Date Status Sheet Submitted 2/24/88

b. Facility Name: Cedar Chemical Corp

b. First Time Report ☐ Update ☒

This form only applies to facilities that have some form of land disposal. Of these facilities, complete this form for only those facilities that are not on a permit track for their land disposal.

3. Facility Ground Water Monitoring Status
(Choose one)

D = 265 Detection
A = 265 Assessment
W = Waiver (Hydrogeologic)

N = GWM Not Required
X = No wells but should have

4. GWM Activity Reported with this Submission	Respon.	Date	Compliance	Date	Hazardous Waste
(More than one Activity can be reported on a single Status Sheet)	Agency	Compliance	Status	Date	Constituent
	E-EPA	Status	Y=Compliance	Report	(NVC) Flag
	S-State	Determined	N=Non-Compl.	Submitted	Y=NVC in GW
			U=Under Review		N=No NVC in GW
01 Evaluation of Installation of Well System				XXXXXXXXXX	XXXXXXXXXXXXXXXXXX
02 Evaluation of Sampling, Analysis and Evaluation Program				XXXXXXXXXX	XXXXXXXXXXXXXXXXXX
03 Notice of Significant Increase in Concentrations		XXXXXXXXXX	XXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXX
04 Groundwater Quality Assessment Report		XXXXXXXXXX	XXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXX
05 Waiver Demonstration				XXXXXXXXXX	XXXXXXXXXXXXXXXXXX
06 GWM Records				XXXXXXXXXX	XXXXXXXXXXXXXXXXXX
07 Evaluation of Hydrogeologic Information				XXXXXXXXXX	XXXXXXXXXXXXXXXXXX

GWM Comment: _____

5. Financial Requirements	Respon.	Date Compliance Status	Compliance Status
	Agency	Determined or:	Y= Compliance
		N = Not Evaluated	N= Non-Compliance
		X = Not Applicable	B= Bankruptcy
C = Closure Assurance	S	9-30-88	
L = Post Closure Assurance		X	
S = Sudden Liability Instrument	S	9-30-88	N
N = Non-Sudden Liability Instrument		X	
R = Corrective Action Assurance Instrument		X	

Financial Comment: _____

FY 1988 HAZARDOUS WASTE COMPLIANCE MONITORING AND ENFORCEMENT LOG

1. EPA ID ARID9191066106491

2. HANDLER NAME: Cedar Chemical

3. ADDRESS: _____

4. Data Entry: NEW ☐

UPDATE ☒

INSPECTOR: lms
(3 initials)

5. DATE OF INITIAL EVALUATION WHICH IS
THE BASIS FOR THIS REPORT: 9/23/88

5a. AGENCY RESPONSIBLE FOR
EVALUATION: S
Put code in box

E = EPA O = Other
S = State B = Contractor/State
C = Contractor/EPA X = Oversight

Act: _____ Seq: _____

6. TYPE OF EVALUATION COVERED
BY THIS REPORT: 03
Put code in box

1 = Compliance Evaluation Inspection CEI
2 = Sampling Inspection
3 = Record Review
4 = Comprehensive GWM Evaluation CME
5 = Compliance Schedule Evaluation
6 = Other - Citizen Complaint

7 = Other - Part B Call-in
8 = Other - Withdrawal Candidate
9 = Other - Closed Facility
10 = Other - General*
11 = Other - Case Development
12 = O&M Inspection

Act: _____ Seq: _____

7. DATE OF EVALUATION COVERED BY
THIS REPORT (enter only if different from 5): ____/____/____

7a. Eval.Comm. _____

8. CLASS and VIOL/PROBLEM-AREA

'X' Viol. no Specialties

'B' Viol. & Specialty

'S' Same Viol./Special. Act: _____

'Z' Pending determ.

'O' No Viol or Special. Act: _____

SPECIALTIES

'I' No insurance only

'C' CA Schedule Violation

'R' 3008(h)-like release

Class of
Violation

Area of Violation

	GWM	CL/PC	Fin Res	Pt B	Cmpl Sch	Manifest	Land Ban	Other
I			S					
II			O					

8a. COMMENT: Addressed by 7-16-87 CAD

9. ENFORCEMENT ACTIONS:

Act	Seq	Class	Area of Violation	TYPE (use code)	DATE ACTION TAKEN	COMPLIANCE DATES		PENALTY		Agy Code	Resp Pers (3 init.)
						SCHEDULED	ACTUAL	ASSESSED	COLLECTED		
Act	Seq										
Act	Seq										

Codes for Type of
Enforcement Action: 03 - Warning Letter
04 - Compliance Complaint
05 - Final Order
11 - Filed Civil Action

12 - Filed Criminal Action
14 - Referral to EPA
18 - Civil Referral to AG/DOJ
19 - Final Judicial Order

Codes for Resp Agy: E = EPA;
S = State; X = EPA Oversight
*LAND BAN ONLY-USE CODE 10

9a. VIOLATION DISCOVERY DATE: ____/____/____ (This is the old C2343 and is now C2366--Status date on screens.)

10. ENFORCEMENT COMMENT: _____



STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

PHONE: (501) 562-7444

August 31, 1988

Mr. Joe E. Porter
Environmental Engineer
Cedar Chemical Corporation
P. O. Box 2749
West Helena, AR 72390

540068
CSN: Permit No.
Media: Air, Water, Solid, Hazardous
Sort: Permit, Compliance, Legal, Misc.

RE: Closure Plan
Extension Request

Dear Mr. Porter:

The Department has reviewed the letter dated August 23, 1988, requesting an additional ninety (90) day extension for closure activities.

The Department hereby approves the extension request of ninety (90) days to the original ninety (90) day closure period making the total time for closure a total of 180 days from initial approval. The date of initial approval is May 24, 1988, and all time-frames are based on this starting date.

If you have any questions or concerns, please contact Mr. D. G. Warrick at extension 205.

Sincerely,

Paul Means
Director

DW/ckh:LTR232

cc: Mike Bates, Chief, Hazardous Waste Division
Gary Martin, Manager, Technical Branch, HWD
Derick Warrick, Engineer, Technical Branch, HWD

Derick

RECD AUG 30 1988
29

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P. O. BOX 2749
WEST HELENA, AR 72390
(501) 572-3701

August 23, 1988

#12

Mr. Mike Bates
Arkansas Department of Pollution Control & Ecology
P.O. Box 9583-8001 National Drive
Little Rock, Ar. 72209

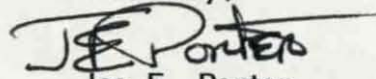
Re: Closure Plan

Dear Mike:

Due to a very lengthy delay in obtaining acceptable laboratory data on soils analysis, we will not meet our original 90 day closure plan schedule. The storage tank has been empty since 1987 and all drums were removed in June. The remaining items are soils analysis and certification.

We request an additional 90 day period to complete this work. We are in the process of contacting another laboratory and anticipate obtaining a timely report.

Sincerely,


Joe E. Porter
Environmental Engineer

cc: J.H. Miles
G.L. Pratt
A.T. Malone

Capitol
Bond
25% COTTON CONTENT

RECD AUG 30 1988

Sammy

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P. O. BOX 2749
WEST HELENA, AR 72390
(501) 572-3701

#8

Aug. 23, 1988

Mr. Sammy Bates
Arkansas Department of Pollution Control & Ecology
P.O. Box 9583-8001 National Drive
Little Rock, Ar. 72209

CSN: 540068 Permit No.
Media: Air, Water, Solid, Hazardous
Sort: Permit, Compliance, Legal, Misc.

Re: Site Sampling Aug. 22, 1988

Dear Sammy:

On August 22, the Department obtained soil samples at our West Helena Plant. We request a copy of any and all, reports and documents generated as a result of this sampling visit.

We appreciate your assistance and look forward to working with you in the future.

Sincerely,

Joe E. Porter

Joe E. Porter
Environmental Engineer

cc: J.H. Miles
G.L. Pratt